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ART. 75.—*New Jersey Marl Pits—Antediluvian Fossils.* [To the Editor of the New York Farmer.]

Sir,—It is well known that a tract of land, from three to ten miles wide, and extending from North East to South West between Raritan bay and the Delaware river, is one of the most remarkable known, for the number, variety, and singularity of its organic remains, and terrestrial and oceanic aelicks. These have been disintered in various forms and places, through the district. Bony parts of the horse, rhinoceras, elephant, and mastodon are among the number; as are also remnants of the antediluvian monitor, oyster, nautilus and belemnites. These have been described by several modern observers, and deposited in some of the museums. They are mostly embedded in a greenish friable earthly substance, commonly known by the name of marle. Besides the beforementioned substances, this marl is empregnated with the sulphate of Iron.

It has for a considerable time been employed by the farmers as a manure. Every farm within the region, by moderate digging, affords a plenty of this fertilizing material. It is to be presumed however that the shells and other calcarious animal matters, are its most valuable and important ingredients; and, if these were absent, the residue would perhaps be useless, or even noxious. As it is however, these marle pits, as they are called, are of incalculable benefit to that section of country. Among the more recent inquirers into the history of these curious productions is John B. Thorp Esq. His farm in the town of Howell and county Monmouth abounds with them, at different depths, from five to twenty two feet below the surface. He presumes they lie much further down; but thither he has not penetrated.

Among these ancient specimens which he has lately collected and presented to Samuel L. Mitchill, are the following, to wit:

1. One large tooth of a shark, in all likelihood belonging to an extinct species. It is 2 1-2 inches long and one and five eights of an inch broad. It is somewhat incurvated; and has smooth (not serrated) edges. The root which once adhered to the jaw is beautifully incrusted with the green marl.

2. Five teeth in different states of preservation, apparently of the fossil fish called the *Horsenail Shark*, from their resemblance to a horse-shoe-nail. The fairest of them has two small subsidiary teeth, near the base, one on each side. The rest have probably had the like, though they seem to have been broken off.

3. Four specimens of small madrepores, the largest of which is about an inch long, and half an inch broad in its greatest diameter, they are of a conic figure, and strongly impregnated with the green marle.

4. Three specimens of the bivalve shell called cocle or cardium; two of which are in entire preservation. The other which is somewhat broken, exhibits the marl filling up the cavity in which the animal formerly dwelt.

5. Three pair of small oyster shells, with the green marl adhering.

6. A fragment of dark coloured (almost black) mineralized wood.

When it is considered that communications of this kind, throw much light on geology, and increase our knowledge of manures, it is very much to be desired that other cultivators and proprietors may follow the laudable example set by Mr. Thorp. This gentleman has, years ago, brought forward other productions and facts of a similar kind.

ART. 76.—*Lucerne, and Grafting Materials.*

[*From the New England Farmer.*]

Mr. Editor.—Being fully convinced, that the Lucerne* grass will be a most important and valuable substitute for clover, I think it a duty, to add the further experience, which I have had in relation to it. I have now four distinct species of it. One is now in its *eighth* summer. Two in their third and one in its second. While orchard grass and clover perished in our late trying winter in considerable quantities, the Lucerne is more vigorous than ever. Those who know the great depth, to which this root extends, will not be surprised at this result. I cut Lucerne for soiling (even this late season) on the tenth of May, and the *new* shoots after cutting, are at this time eight inches high. I have it growing from seed sent to me by the Society of the Georgio-fili at Florence (a name which signifies friends of agriculture)—from seed

* I always use the French orthography for this grass, because I know no sufficient reason for changing it to Lucern.

brought home from Chili, by Commodore Hull, and from American seed. They are all the same plant, the *Medicago sativa* of the botanists.

The grounds of preference of the Lucerne to the clover, are the following :

1. The clover is a biennial plant, and like all biennial plants it furnishes a poor, or no crop the first year, and dies at the end of the second. If uniformed minds should oppose this last assertion, because they find clover always in their grounds, I reply, that this is, because its seeds are abundant in our soil, and manure, and there is a constant succession of plants —but let any one sow clover only, and in the third summer his field will present a most desolate appearance.

2. The next superiority of Lucerne over clover is, that it will give three crops, often four, at least in good land, in the same season, in which it is sown, provided it be sown in April. In this respect, I am able to assert from experience, that it is better adapted to *our* climate, than even to that of France, for reasons, which I think, in addition to the FACT, would be satisfactory.

3. The Lucerne is not so coarse a grass, as the Clover—its stalks never become so woody, and yet they are stiffer, and less liable to lodge.

As to curing it for hay, it is about as troublesome as clover, but if got in half cured, and salted, it makes a better hay. Now, let me not *be misunderstood* on this subject. There is nothing, which is so injurious to the prevalence of sound opinions on all subjects, as *exaggeration*. It has done more mischief in all arts, and sciences, than any *other* cause.

Lucerne is only to be compared with *clover*. It is no sort of substitute for the culmiferious grasses. It cannot be put, for a moment, in competition, with herds grass, as we call it, or timothy, as the southern people term it—or for orchard grass, or for pratensis, or red top, or the meadow foxtail, or the excellent grass recommended by Mr. Phinney, the tall meadow oat grass. These grasses are, and must be, *forever*, our chief dependence for excellent hay.

I recommend the *Lucerne solely* as a substitute for Dutch *clover*, and it ought to take its place, and, within twenty years, it *will* take its place, everywhere, in America. I say it, without fear of ridicule.

The Lucerne is the favorite grass of France, south of the river Loire, of Spain, Portugal, and Italy—of Rio Janeiro—of Buenos Ayres, and Chili. Why does it suit these climates? Because its long tap root enables it to sustain the long droughts and excessive heats of these climates.—But we, in Massachusetts, are subject, in an eminent degree, to these same evils. When our crops fail, it is *chiefly owing* to these causes. The Lucerne is calculated for early and late pasturage—for small farmers, yielding at least double the quantity of food, which any other plant can do. I may be called a *speculative* farmer, and I am so, if 25 years close attention entitles me to the name. But *practical* farmers will find, that so far as it respects *this* production, my experiments have not been without their *practical* use.

GRAFTING MATERIALS.

Not discouraged, by all, which has been written on this topic with us, I am induced to give the latest improvement in England on this subject.—As an experiment, derived and recommended from *such* a source, it would have its value, but it, at once, recommended itself to my notice, for its simplicity, neatness, and reasonableness. I shall subjoin my account of its success with me.

The new method is thus described in a letter from David Powel, Esq. inserted in the London Horticultural Transactions, vol. v. I shall only introduce the essential directions.

" Grafting wax properly prepared, when in a melted state, is spread evenly on sheets of moderately thin brown paper, which when cold is cut into strips about three-quarters of an inch wide. When one of these strips is to be used, warm it with the breath, and bind it round the stock and scion, pressing it gently with the hand, when it will be found to adhere so closely as totally to exclude both air and moisture. No further care is necessary, though it may be as well to look over the grafts occasionally, pressing the paper close with the hand where it may have before been occasionally missed." This plan of applying wax cements instead of clay, struck me at once, as not only exceedingly simple, but admirable for its neatness.

I accordingly treated 100 grafts in this mode. I procured some coarse, but strong and flexible brown paper, made of tarred cordage, and having prepared the grafting wax, by the recipe subjoined, I spread it with great facility, by a common table knife, over the paper evenly. It cools instantly. I then cut it into strips of about an inch wide. In a warm sun, it requires no heating—but in a cool day, the breath will warm it sufficiently. As soon as the graft is inserted and tied with matting, or twine, the strip is wound round from the bottom of the cleft, to the insertion, and sawed end, and doubled over that. The operation requires *five seconds only*, and the air is most effectually excluded.

I put in grafts with clay, and with this *new* method, and the success of the last was *much greater* than with the clay. Six weeks have now elapsed, and the covering is perfect. Neither rains, nor sun affect it. There is one other great benefit. The paper is made stronger by the grafting wax, and may

be unwound, and taken off without injuring the bark. I have applied it to green-house plants—to the Camellia. Here permit me to add, for the benefit of florists, that the Camellia, heretofore *grafted only* by approach, is found to succeed equally well, if grafted in the *manner of approach grafting*, the scion cut off, and the end left long enough below, to insert it, into the neck of a phial of water, or into a turnip, or potato. The grafting composition recommended in England, and which I used, was 1 lb. of pitch—1 lb. of rosin—1-2 lb. of bees wax—1-4 lb. of hog's lard—1-4 lb. of turpentine. I hold, however, *very cheap*, all these *specific nostrums*; great variations may be made in them, taking care to see, that the compound is neither too stiff to use, nor too soft to melt, under the solar heat. I have been very tedious, but could not well abbreviate my remarks.

J. Lowell.

Roxbury, June 1, 1829.

N. B. I invite gentlemen to visit my grounds, and to see with their own eyes, the result of my experiments on both subjects.

ART. 77.—*Climate, Soil, and Vegetable Productions of Oregon Territory.* [From the Journal of a French gentleman.]

"The mouth of the Columbia is situated in 46 degrees and 19 or 20 minutes of North latitude, and between 125 and 126 degrees of West longitude from the meridian of Greenwich. At the mouth of the river the tide rises nine feet perpendicularly, and is perceptible from 75 to 90 miles from the sea. During the three years which I spent at the Columbia river, the cold seldom passed the freezing point, and I think the heat was never greater than 75 or 76 degrees. The West wind is most frequent in Spring and part of the Summer. It commonly rises with the tide and diminishes the heat of the day. The North-west wind is almost constant during the latter part of Summer and first of Autumn. When the North-west wind ceases, it commences from South-west, and blows almost continually from the first of October till the end of December or beginning of January. This is the rainy season, and the most disagreeable in the year.

The surface of the soil in the vallies is a coat of black vegetable earth, not more than five or six inches thick.—Beneath this is a kind of gray earth, extremely cold. Under this sub-soil is coarse sand or gravel, and beneath this, stones. On the high lands the soil is very thin and stony. On the sea shore to the south of Point Adams, we found a kind of white earth resembling pipe clay. The Indians brought specimens of red, green, and yellow, earth, and a shining mineral substance resembling lead ore. These were found at a distance further south. We were unable to find any lime stone, and failed in several attempts to make lime.

We had taken care to bring with us in our Tonquin, all kinds of garden seeds which we planted in the month of May. The garden had a fine appearance in August, but although the vegetables were left in the ground until the end of December, nothing came to maturity but the radishes, turnips and potatoes. The turnips were of a prodigious size. One of the largest which we had the curiosity to weigh and measure was 33 inches in circumference, and weighed 15½ pounds. They were still green at the end of December, and had been left in the ground on this account, but the seeds were all destroyed by the mice, which concealed themselves in the stumps which had been left in the garden, and did us much damage.

The dozen of potatoes which were all we had been able to preserve produced ninety. These were preserved with the greatest care, but to no purpose. We planted them the next Spring, but the second season was so much colder than the first they produced nothing at all.

It would seem to result from these facts that the soil along the Columbia is unfit for cultivation where the vegetation is so extremely slow. But the land is not every where the same, and there are probably places more fit for gardening than that which we had selected. This supposition is the more probable when we consider that the vegetable productions of the country are very different near the upper and lower parts of the river.

The most common trees near the mouth of the river and in the vicinity of our establishment, were Cedar, Spruce, white Pine, Hemlock, &c.—The cedars there are four or five fathoms in circumference, and the hemlocks from 12 to 20 inches in diameter; but the most extraordinary tree which I saw in the country was a white pine. This tree had been stripped of its top and branches by lightning, and nothing but the trunk remained, resembling an immense column from 80 to 100 feet high. This tree was on the side of a valley in the rear of our establishment. Seven of us stood round it with our arms extended and were not able to encircle it, although we touched only the ends of our fingers. On measuring it more accurately we found it *forty two feet in circumference.* We had intended to erect a stair case around it and make a platform on the top for a kind of observatory, but we were so much occupied with more urgent business that we were obliged to abandon the project. Ash and Oak were plenty near our establishment, but the last mentioned tree was not very large.

From the middle of June to the middle of October we had always wild fruits in abundance. The first were white strawberries; which although small have an excellent taste, and afterwards the red and orange colored Raspberries. These raspberries grow on a bush 12 or 15 inches high, which is found in wet shady places. They are more sour than those in this country. The months of July and August furnish a very pleasant acid fruit of a blue color and about the size of a cherry. The plant which produces them is a bush of no great size, and the leaves are small and roundish. There are others of a red color but somewhat smaller. In the month of August another fruit is found which grows in clusters on a small bush like the garden currant. The leaves resemble those of the laurel, but thicker, and evergreen. The fruit is oblong and in rows round the cluster. It is open at top in four divisions, so that the inside can be seen. This fruit has a fine taste, is wholesome, and may be eaten in any quantities without injury. The natives make great use of it and preserve it for winter use, by making it into cakes dried in the sun. We also found Blue-berries, Cherries, Currants, wild Pears, and little wild Apples, of the kind called by the English "Crab Apples" which grow in bunches, and are too hard and sour to be eaten without cooking.

There are in this country a great variety of matricious roots, and the natives make great use of them, particularly such as are medicinal or antiscorbutic, our people also used them with the same intention and equal success; one of these roots much resembles a small onion both in appearance and taste. There is also one which they reduce to paste by pounding and make it into cakes of five or six pounds weight, and bake them on flat stones heated in the fire. These cakes have a taste almost equal to our own bread. In our first voyage to the falls the natives of the upper part of the country presented us with buiscuits very well made, of a square form and imprinted with various figures. These buiscuits are made of a white root which is reduced to paste, made in the proper form and baked in an oven or dried by the heat of the Sun.

ART. 78.—*Cultivation of the Vine in the United States.* By the EDITOR. [Continued from page 115.]

Mr. J. L. North, of Rustichello, S. C. under date of April 1825, states that but few individuals in his vicinity had made attempts to cultivate the grape. "The vines employed" says he "were almost wholly of foreign growth, and procured, I believe, principally from France; Col. Pinckney obtained his from Dr. Moore of Charleston, who got them, in the first instance from France of which country he is a native. I have understood they answered very well with Dr. Moore, but with Col. Pinckney they have entirely failed. The black Hamburgh bore for a year or two, but latterly the grapes have rotted; and with the other vines it has been grubbed up and thrown away." Mr. N. thinks the failure should be ascribed to improper preparation of soil, injudicious selection, bad pruning, and to climate, but more particularly to the first two causes. Several other gentlemen, in Mr. North's district, made fruitless attempts. N. Herlemont, of Columbia, a French gentlemen, brought from France 200 varieties, 40 or 50 of which survived the voyage and produced him wine resembling good Hermitage or Burgundy.

Mr. S. Maverich, of Montpelier, S. C. writes, June 1825, that "many families in different parts of the state have European vines, in their gardens, but I have heard a general complaint of the rotting of the grape after they have attained nearly their full size." The rot commences about the middle or latter part of June, and is at first a small drab spot on the side of each grape, spreading until it covers the berry, which in a few days dries up. "Of native grapes, one kind, and perhaps the best and largest, is the Muscadine; it grows but on rich rivers' bank land; the berry, black, and from half an inch to one inch in diameter, and in great abundance; it is sweet and well flavored, the wood ash colored and tough as hickory." Among other native vines, he mentions the Cherokee, bearing a well sized and flavored grape, which, like the European, rotted the previous year. "I have attempted" says Mr. M. "for many years, say 20, to cultivate the vine, and have collected every kind I could possibly get hold of, not only of natives, but from different parts of the world, and have had upwards of 100 kinds. Some have died and I now have 90 kinds.

"I have one small vineyard, one and a half acres, in front of my house, having a south aspect and small declivity, chiefly now in bearing, and full of grapes at this time; they consist chiefly of the following sorts: Black Hamburgh, a large, black berry, rots badly, particularly on the old vines—the Cape of Good Hope grape, a chocolate colored or brick-dust colored; bears and ripens well; from one half to three-fourth pound bunches; a fine eating grape—Small Spanish, a black berry, bunches large, from one-half to a pound; finest flavor; rots some years, bears well and grows well—the small, blue grape, bears tolerably well, and ripens tolerable well—the Madeira, an oval, black berry, fine flavor, rots badly—the Miller grape rots badly; and I have another new vineyard, adjoining, covering two acres, com-

menced last winter and set out from France, Spain, Philadelphir, New-York, Baltimore, &c. comprising, as I said before, 90 kinds, having attempted to collect such a variety, as there has been such demand for the fruit. The object I had in view, was to ascertain what kinds would suit this country, so that I have not made any considerable quantity of wine, nor has the result from what I have done, yet enabled me fully to ascertain as to the quality of the wine, or quantity that might be made."

Our readers will perceive that most of the information, which we have as yet given them, was furnished in 1825. The following letter, dated Greene co. Alabama, May 14, 1829, is from Robert W. Withers to the Editor of the American Farmer. With respect to the remarks concerning Mr. Loubat's vineyard, it may be proper to state that we applied to Mr. L. in relation to his success in cultivating the vine. He declined furnishing us information, until he ascertained the result of this season, as his vineyard is yet young. We truly hope his laudable effort to introduce the vine into this country, will not be unrewarded. We shall be happy to hear from him, or any other person who has paid attention to foreign or native vines.

"With regard to the vine all our efforts were fruitless so long as we confined our attention to the cultivation of the foreign—particularly the French varieties. Being myself a resident in the French Grant, one of the leading provisions in the transfer of which to the French Emigrants, was the cultivation of the vine; I have had many opportunities of seeing experiments fairly tried with a great many varieties, and under the care of professed Vignerons, but never in one instance have they been repaid for their labor and expense. Being generally entirely unacquainted with any other kind of cultivation except that of the vine, and finding themselves so entirely baffled in their best directed efforts to insure its success, many of them abandoned their golden dreams and their country together. Hence it is that neither the views of congress, nor the expectations of individuals have as yet been at all realized. With such discouraging prospects, few others were induced to embark in the cultivation of Bordeaux vines, but it happened that while the experiments were going on, a gentleman in New Orleans, who was agent for the Swiss association at Vevay, and an acquaintance of the unfortunate General Lefebvre Desuervettes, sent him a few cuttings of vine, without any description of the kind or history of the manner in which he became possessed of them, which upon trial have revived our desponding hopes. They are evidently I think natives, having an entirely different aspect from any of the imported vines, and agreeing entirely with the other native vines I have, in their long joints, red appearance of the bark, exuberance of growth, and pulpiness of fruit. The Vigneron who lived with him at the time, and who fell heir to most of the products of his little farm on his leaving this country in the unfortuate ship Albion, found that they very far exceeded all other kinds of vine in his vineyard, and as a finesse to make them sell, called them the Madira grape, but he knows nothing of their history. He now cultivates them however, to the exclusion of every other kind, having even dug up all his imported varieties, and is succeeding in making a handsome vineyard of five or six acres of them. They are not more rapid or luxuriant in their growth than another variety I have—the Schuylkill muscadel—but the fruit is more esculent, and has not so much of the wild mu scadine character. Some wine of a very good quality has been made from them, and this year I have flattering prospects of making wine from each of these varieties. This spring my French Vigneron has dug up all my Bordeaux vines, heaping upon them all the maledictions which were bestowed on the unprofitable fig-tree, and telling them that they have behaved themselves so badly in this country, that he could no longer claim any friendship with them.

In confirmation of my idea that if we ever succeed in cultivating the vine profitably in the United States, it will be with the native varieties, I have found in my travels during the last year, which extended through sixteen of the states, that the same idea is almost universally entertained, by all who have been engaged in that kind of cultivation. At New Orleans, I saw a very fine muscadel vine in the garden of a horticulturist in the upper Fauxbourg; but was grafted, as he told me, on a native, while one which stood immediately contiguous, but which had not been grafted was unthrifty and insignificant in its appearance and bore comparitively no fruit at all. They were both planted at the same time, and were then sixteen years old, so that the experiment in that instance was completely decisive, that unless grafted on native stocks, they will not succeed.

The experiments of the Swiss colony which settled in the United States some twenty years since, with the view of cultivating the vine, led to the same results. As you are already no doubt aware their first location was in Jessamine county, Kentucky, where by throwing in their own funds and by subscriptions of some American gentlemen in the vicinity, who were anxious to embark in the enterprize, they raised a common stock of a about $10,000, the whole of which they expended without even succeeding in making a vineyard, much less any wine. A few of the most enterprising still persisting in the idea, that

wine could be profitably made from some kind of vine or other, as the woods were well supplied with native ones, removed to Vevay in Indiana, where I spent a day in my travels last summer, and found them living comfortably and happily from the products of small vineyards composed entirely of our native vines—principally the Schuylkill muscadel.—They there generally call it the Cape grape, but say they obtained it from the Schuylkill river, near Philadelphia, and there is no question in my mind of its being the very one described by Mr. Landreth and others, as the Alexander's or Schuylkill muscadel. Besides they agree that no imported vine, so far as their own experience extends, has ever withstood the mildew or carbon, which in a few years invariably destroys them or prevents their bearing fruit, and this, like all the other natives, has never been materially affected by it; while at Vevay, I do not recollect to have seen a single European grape vine, except one very diminutive one in Mr. Dufours' garden, and he told me they had long since been compelled to abandon their cultivation.

The only vineyard in the United States which I have seen composed entirely of imported vines is Mr. Loubat's, on Long Island, near New-York. The vines were small and unhealthy, in comparison with the native varieties, some of them having a little precocious fruit the first year, which with mine, has generally been the harbinger of disease and barrenness afterwards. So far from becoming acclimated, mine have deteriorated every year. I have never obtained one peck of grapes from them, though I had twenty-two different kinds planted on my farm at one time. Nor have I ever eaten any grapes at but one Frenchman's in the whole settlement, and his vines never bore, except that season, and have subsequently died.

The Messrs. Landreths, of Philadelphia, deservedly considered as amongst our most distinguished horticulturists, entertain the same views of all imported vines when planted in the country, and he told me last summer, when in that city, that he had not a single variety he could recommend. The same facts obtain so far as my observation and information extend, throughout the southern states. In North Carolina, a good deal of wine is made from the Roanoke or Scuppernong grape, some of which I here found to be very pleasant; and Mr. Herbermont, near Columbia, in South Carolina, and Mr. Spalding, in Georgia, I believe, are succeeding entirely with the native grapes. But I must beg your pardon. Instead of confining my observations to the cultivation of the vine in Alabama, I have taken you round the United States. In such a discursive range I have probab'y travelled over much ground, with which you are much better acquainted than myself, having never devoted any attention to agricultural pursuits of any kind, till within the last few years. My object is merely to elicit information from others on this very important and interesting subject, being myself determined to persevere till I succeed in making good wine, and in making it profitably. If you possess any information of a profitable and thrifty vineyard from vines *known* to have been imported, I should be thankful for some information through the medium of your paper and otherwise, for as yet I have heard of none; and having experienced much vexatious disappointment myself, besides having incurred very considerable expense in their cultivation, I think it is time that their reputation should be established, or the American people no longer deluded with the hope of succeeding in making wine from foreign grapes."

We will subjoin the following extract from a communication to the N. E. Farmer, dated Roxbury, Mass. April 1829.

"Without entering into the question, whether any native grape is to be compared with the imported ones, upon which should I state my opinion frankly, I should be charged with a want of patriotism, and after stating my own conviction, that the native grapes of the South excepting the Isabella, will be found to be in *common years* as tender as the European ones, I think I shall find all horticulturists agreeing with me in the opinion, that, if we could ripen the European grapes in the open air without walls or terraces it would be a great desideratum, and worth many exertions and sacrifices. In 22 years, I have obtained not more than 6 good crops of well ripened fruit, on a dry and warm soil.

I have frequently expressed to my fellow cultivators the conviction of the hazard of leaving the Isabella and other southern grapes exposed without covering through the winter. The last winter, tho' far from severe, (probably owing rather to its mildness) has been fatal to foreign and native grapes, even in Philadelphia, and to the peach, and vine, in New Brunswick, and N. Jersey. With me it has destroyed the Cane Raspberry, which had stood five winters of greater general severity. Yet there are some anomalous facts, while the peach has lost its fruit, and the American raspberry has perished, a delicate Chinese Ailanthus has not been injured."

[To be continued.]

ART. 79.—*Kalendar of Animated Nature in the western part of the state of New York* [To the Editors of the N. Y. Morning Herald.]

GENTLEMEN—Believing that whatever may have a tendency, even in a slight degree, to illustrate the

Natural History of our country, and the variations of its climate, will find a place in your columns, I have taken the liberty of forwarding you the following result of a series of observations which I commenced several years since, and have continued to the present time. The place where they were made is in the central part of the state, in the southern part of the county of Onondaga, 15 miles south of the Erie Canal, and about 1,000 feet above that, or the Seneca level. Throughout this section of country, there is a difference of from 6 to 8 days in the progress of vegetation, the flowering of trees, &c. on the hills, and in the deep vallies, which intersect the country, although the distance between them may not be greater than a mile.

Year.	Appearance of the Robin.	Blue Bird.	Barn Swallow.	Chimney Swallow.	Frogsheard.	Blossoming of Apple Trees.
1819	April 1st.	April 31	April 18th.	May 4th	April 10th	May 18th
1820	March 23	March 23	April 20	May 5	April 8	May 13
1821	March 29	March 14	May 1	May 7	April 7	June 1
1822	March 20	March 20	April 28	May 9	April 1	May 20
1823	March 25	March 25	April 19	May 7	April 7	May 23
1824	March 26	March 28	April 25	May 3	April 6	May 29
1825	March 12	March 12	April 25	May 4	March 15	May 25
1826	March 9	March 10	April 26	May 3	April 5	May 17
1827	March 10	March 8	April 12	May 10	March 2[illegible]	May 20
1828	March 10	March 10	April 17	May 6	April 8	May 17
1829	March 29	March 15			April 10	

Remarks.—Wild geese have in every year commenced their migrations to the south between the 13th and 20th of October. The disappearance of the swallow has not varied more than three or four days; and with but two exceptions, snow has fallen between the tenth and fifteenth of May, in every year. Much has at different times been said, about the changes of our climate, some contending that it was gradually becoming warmer, while others argued the contrary. The present severe winter will have a tendency to set the former right; while nothing can be drawn from it, in favor of the opinion held by the latter, since such variations are constantly occurring. The uniformity in the times of the appearance of the frog, and the chimney swallow, in a climate as variable as ours, must excite some surprise in those who have not been accustomed to note the times and seasons. If any one of your readers in a different section of the country, could furnish a the comparison would be extremely gratfying to at least one of your subscribers. W. G.

ART. 80.—*Description and Medicinal Properties of Plants, noticed in Loudon's Catalogue of Periodical Works on Gardening and Botany.*

The British Flower Garden. By Robert Sweet. Monthly, price 3*s*.

Tropœolum tricolorum. (*fig.*) The root is tuberous, oblong, with a rough brown bark; the stem slender,

climbing to the height of 10 or 12 ft. by the twisting of the leaves; the leaves are peltate, and so deeply divided, as at a distance to resemble those of the common lupine; the flowers are numerous, axillary, of a glossy scarlet orange color, with a circle of dark purple, nearly black, round their margin. Altogether, it is one of the most beautiful and interesting climbers that have been introduced to this country for some time; and we have no doubt its tuberous roots, about the size of beans, will beas much in demand for planting close to bowers and verandas, as those of crocuses are for beds and borders. "Someroots of the present, and another species, were presented to Mr. Anderson by Miss Oriana Georgiana Reinagle, who received them from Miss White, daughter of the Vice-Consul at Valparaiso." We hope Mr. Sweet will take the first opportunity of dedicating a genus to each of these young ladies.

Rheum australe.—Rheum (from the river Rha, now the Volga, beyond which grows a root bearing its name, much renowned in medicine, according to Dioscorides; from *rheo*, to flow, in allusion to its medicinal qualities, according to Linnæus) australe; Polygoneæ. The leaves are heart-shaped, large, their margin set with little red glands; the flowers are of a blood-red, as are the seed vessels; and from these circumstances, it is easily distinguished from every other species of the genus yet known. Dr. Wallich, of Calcutta, first transmitted seeds of this species to England; from which plants were raised by A. B. Lambert Esq., of Boyton House, and flowered in June, 1828. Mr. Don and Mr. Sweet consider it "undoubtedly the handsomest species of the genus," independently of "the interest attached to it as a medicinal plant." The following description is by Mr. David Don:—

"The stem in the cultivated plant is from 7 to 10 ft. high; the leaves are numerous, ample, and of a grassy green; the flowers are smaller than in any other species of the genus, of a dark or blood red color, and disposed in many branched clusters; the seeds that afterwards appear are dark red, with a highly polished surface, resembling, at a distance, clusters of glittering beads. When bruised, they emit a powerful odour of rhubarb, are highly astringent, and dye the fingers red, from the quantity of colouring matter contained in the testa. It is perfectly hardy, and appears to ripen its seeds even more copiously than the other species; and, from some trials that have been made with the footstalks of the leaves, it seems disposed to vindicate its medicinal claims even in our own climate. The colour of the flowers would alone be sufficient to distinguish it amongst its congeners. The late period of flowering deserves also to be remarked. As all the species are endowed, in a greater or less degree, with similar properties, much difference of opinion has arisen, both among botanists and pharmacologists, respecting the one that yields the rhubarb of commerce. Linnæus considered it at first as the produce of his R. Rhabarbarum or undulatum, but he afterwards appears to have altered his opinion in favor of R. palmatum; which opinion has been almost universally adopted by pharmacological writers, although it is admitted that the qualities of the root of R. palmatum differ materially from the Turkey rhubarb of the shops: but this deterioration has been attributed to the difference of soil and climate. The R. australe appears to be peculiar to the great table lands of central Asia, between the latitudes of 31° and 40°, where it is found to flourish at an elevation of 11,000 ft. above the level of the sea. Large quantities of the roots are collected for exportation, in the Chinese provinces within the lofty range of the Himalaya. The best is that which comes by way of Russia, as greater care is taken in the selection; and on its arrival at Kiachta, within the Russian frontiers, the roots are carefully examined, and the damaged pieces removed."

Mr. Sweet has been "informed that the stems of the leaves have the same effect as the root; only, of course, a greater proportion of them will require to be used. They may be made up in a small tart, like the stems of the common rhubarb." Culture as in the other species, covering the roots a little in very severe winters.

Potentilla Russelliana—This splendid flowering plant is of hybrid origin, being intermediate between P. formosa and P. atropurpurea, varying with leaves containing three, four, and five, leaflets. It was raised from seed last year, by Mr. W. Russel, at his nursery at Battersea, who has employed a great deal of time with the plants of this genus, to try to obtain something handsome from them; and his labour has been so far crowned with success in obtaining the present handsome plant, which may be considered as one of the most splendid hardy perennial plants that need be cultivated in the open borders of the flower garden, and it is well deserving a place in every collection. Neither of its parents can come near it in brilliancy of colour, which is of a glossy scarlet. It is quite hardy, and thrives well in the open borders in the common garden soil, and may be increased by dividing at the root, but is not likely to ripen seeds, as the anthers are mostly all without pollen; so that it is not likely soon to become common. Mr. Russel has already increased it, and informs us that he is now selling the plants at one guinea each."

MEDICAL BOTANY. By J. Stephenson M. D. and J. M. Churchill, Esq. Surgeon. Monthly, 3*s* 6*d*.

Melaleuca Cajuputi,—A native of the Molucca Islands, and affords from its leaves, the Cajeput Oil of the shops. Its trunk is tolerably erect, and covered with an ash colored spongy bark; the branches are scattered and drooping; the leaves are alternate, not unlike those of the willow, and the flowers are small and white. The smell of the oil is supposed to preserve natural history collections from insects.

Menyanthes Trifoliata, Buckbean or Bogbean.—"One of the most beautiful of our indigenous plants," and is often found in large beds at the margin of ponds and brooks. The roots are long, creeping, and jointed, from which proceeds a smooth, erect, cylindrical stem, about a foot high, and destitute of leaves; the leaves are of a bright green, and obovate, and the flowers grow in a loose spike. It is an excellent and cheap tonic, and strengthens digestion, in doses of about 10 grains.

Tamarindus Indica; Leguminosæ.—The Tamarind tree is common in almost every part of India and the West Indies, and, "grows most luxuriantly in all the Eastern Islands. The soil of Java is said to bring the fruit to very high perfection; and those of the dependent island of Madura are reported to be the best." It is considered dangerous by the natives of India to sleep under this tree, and its presence has a deteriorating effect on grass and herbs. Its thick and lofty stem is terminated by spreading branches, bearing tufts of alternate, smooth, bright green leaves, abruptly pinnate; the short lateral branches are terminated by flowers which are in simple clusters; the calyx is divided into four straw colored segments, and the petals are three, rather yellow, and beautifully variegated with red veins; the seeds are "roundish, semewhat angular, flattened, hard, polished, with a soft central circumscribed disk at each side, and lodged in a quantity of soft pulp. The fruit is cooling and laxative; but while it gratefully allays the thirst of ardent fever, it must be taken in

large quantities to insure the latter effect, and is then apt to produce flatulence." The stones of the fruit are prescribed by the physicians in dysenteric complaints, and for menorrhagia. It is very much adulterated in commerce, and the deceit is very difficult to find out.

Guaiacum Officinale.—"The tree rises to the height of 30 or 40 ft., and is near a foot in the diameter of its trunk, with numerous, divaricated, knotty branches, leafy at the ends. The bark is very smooth, variegated with green and white; that of the branches being uniformly ash-coloured, striated, and marked with fissures. The flowers are pale blue, on simple, axillary, clustered stalks, shorter than the leaves," which are smooth, dark green, opposite, and abruptly pinnate. The wood was first employed in medicine by the natives of St. Domingo. Guaiac may be said to be a stimulating medicine; proving diaphoretic in a dose of a scruple or half a drachm; and purgative in large doses.

Rosa Centifolia.—A native of the south of Europe, the petals of which are considered to be slightly laxative; and the syrup is often mixed with a little almond oil, and given to children as a domestic medicine.

Botanical magazine. By Dr. Hooker. Monthly. *Oxalis Carnosa.* Oxalideæ.—This singular species of wood sorrel was received from Valparaiso and well deserves cultivation, flowering during a great part of the summer. It succeeds well in a cool green-house. The root is a large subfusiform tuber, the leaflets ternate and obcordate, and the flowers of a pale yellow. It is readily increased by the roots, and will, without doubt, flourish in the warm season, when planted in light earth in a sheltered situation in the open air.

Artocarpus Incisa. Urticeæ. "A tree from 30 to 40 ft. high, with a diameter of trunk from 1 ft. to 1 1-2 feet, bearing a large head of many, spreading, fragil branches, and abounding in every part with a viscid, milky juice." The leaves are from 1 to 3 ft. in length, and often 1 1-2 feet broad. They are alternate, ovate, but cuneate, and entire at the base. It was seen abundantly in the Ladrone islands by Dampier, who says that the fruit is as big as a penny loaf, when wheat is at 5*s.* the bushel. It is eaten by the natives of Guam, who gather it when fully grown, and while it is green and hard; they then bake it in an oven, and scrape off the outside black crust, when there remains a tender thin crust; the inside consists entirely of a fine substance, soft, tender, and white, resembling the crumb of a loaf.

Edwards botanical register. Continued by J. Lindley, F. R. S. &c. Monthly, price 3*s.* 6*d.*

Lobelia Longiflora. Lobeliaceæ.—One of the most venomous of all known plants. It is common in St. Domingo, Cuba, Jamaica, and Martinique, where it grows in damp places and by the sides of streams. In this country it is only cultivated in the stove, where it is a rarity. It is an annual, flowering in July and August, and seldom exceeds a foot in length. In its native country it is said to prove fatal to horses which eat it, swelling them until they burst; whence the Spaniards call it *Rebenta Cavallos.* Taken internally, it acts as a violent cathartic, the effects of which no remedy can assuage, and which ends in death. The juice of the bruized leaves or stem, applied to the eyes or lips, excites a severe inflammation; as Jaquin found to his cost, having accidentally allowed some of the juice to remain on his hands. The natives of St. Domingo know the plant well under the name of *Quodee.*

ART. 81.—*Miscellaneous Selections from Loudon's notices of works on Agriculture and Rural Economy.*

Quarterly Journal of Agriculture. Edinburgh, 5*s.* 6*d.*

The farmers in Scotland, though unquestionably the first in the world, have hitherto been more remarkable for practical skill than scientific knowledge. The papers in the *Farmer's Magazine*, which commenced with the current century, and terminated in 1825, with the 26th volume, attest the truth of this assertion. The principles of political economy were evidently much better understood by many of the writers in the magazine alluded to, than those of natural history, animal or vegetable physiology, or chemistry. The *Quarterly Journal of Agriculture* aims at a more scientific character, and will only succeed by maintaining this character; not only because the former magazine was felt to be rather unvaried in its subjects, but because a new class of readers has arisen, moulded in some degree by the progress of the age. The contents of the four numbers of this new agricultural journal, exhibit a judicious assortment of scientific papers on the sciences on which agriculture is founded, blended with others of a practical nature on various departments of rural improvement, and we shall now look them over, and give the essence of what we think of most value to gardeners.

The Atmosphere.—A very excellent paper. The heat of the air is chiefly, if not altogether, produced by the rays of the sun; and the temperature of a place depending on the quantity of sunbeams alighting upon it, the temperature of the earth at different places, must be very different, because it is not a flat surface facing the sun, but a globe. Other circumstances being the same, the heat produced is at a maximum, when the sun's rays fall perpendicularly on the surface to be heated. For this reason the equator is warmer than the poles, the face of a hill than its back,

and a southern slope than a northern slope. But there are other causes which affect the temperature of a place; the densness of the atmosphere over it, the condition of the surface, and the character of the neighboring countries or seas. "If there be much marshy ground, wet land, or any condition of surface calculated to charge the air with damp, the air will be comparatively cold; because, much damp in the air lightens it, and light air is with difficulty heated. Water itself, too, whether in a liquid state or as a vapour, is extremely difficult to be heated; and therefore both circumstances combine to make wet lands cold lands. It is very interesting to observe how beautifully the laws of nature operate to keep down such a state of things, and how kindly they combine with the husbandman, rendering his labours to ameliorate the soil the means of ameliorating the climate also. That there shall not be much air cold and very damp at the same time, is provided for by the law, that the power of air to contain damp diminishes as its temperature falls. And that the climate shall be improved by improving the condition of the soil, and the improvement of the soil once effected, be for ever kept up, is provided for by the same law. For, when the surface has been drained, and the water run off to the sea, or gathered together in deep pools, which present but a small surface compared with a field, and from which, of course, a comparatively small evaporation can take place, then the average temperature of the place rises, and its average power of taking up damp increases; so that tho' the same quantity of rain should fall in the course of the year as before improvement, still the air will take it all up, and keep the soil in good condition, Instead, then, of ascribing the foulness of our pastures —the lateness and poorness of our crops— the stiffness of our land—the miriness about the farm-yard—the wetness of the land—the coughs and consumptions of the family, to the quantity of rain that falls, let the ground be effectually drained, and the heart of the air will be warmed towards the farmer. Rain will be sent in due quantity to refresh the fields, but will no longer be left in the furrows. The warm air will suck it up as soon as could be wished. Without draining off the superfluous water, it may be safely stated, that an elevation in the temperature of the air would be productive of the most fatal consequences."

Mixtures in the Air occasioning Disease and Death in Plants.—M. Marcet proved by experiment that plants were poisoned by water holding oxide of arsenic in solution, and by a few grains of arsenic introduced in a cut. Opium, hemlock, foxglove, and oxalic acid, absorbed by plants, also killed them. D. Martin Esq., found cast iron tallies poisoned the soil about the roots of his pinks and carnations; and the trees and plants in the towns of Britain, where the atmosphere is more or less impregnated with coal smoke, are never so geeen and luxuriant as those in the country, or those in the towns on the Continent where wood is used as fuel. The sulphurous acid gas is exceedingly deleterious to vegetables, even when there is so small a quantity in the atmosphere, as to be hardly or not at all discoverable by the smell. "In opening up to the agriculturist these sources of death and disease to vegetation, do we not enable him to look upon his soils and his crops with an enlightened eye?"

Remarks upon a supposed Law of Vegetable life, limiting the duration of plants obtained by cuttings to the Natural Term of Life of the Stock whence they were taken. By the Rev. Dr. Fleming, of Flisk.—This is a most valuable paper. When Marshal, in his *Rural Economy of Gloucestershire*, remarked that "engrafted fruits are not permanent, they continue but a time," he probably did not anticipate that he was announcing a conjecture destined to become an article of faith, under different forms, among intelligent agricultural and horticultural writers. Mr. Knight embraced the opinion of Marshal, and, in his *Treatise on the Culture of the Apple and Pear*, gave it as his opinion, that, "the continuance of every variety appears to be confined to a certain period, during the early part of which only it can be propagated with advantage to the planter." Mr. Bucknall expresses himself more plainly on the subject, in the *Transactions of the Society for the encouragement of Arts.* "When the first stock shall, by mere dint of old age, fall into actual decay, a nihility of vegetation, the descendants, however young, or in whatever situation they may be, will gradually decline; and from that time it would become imprudent, in point of profit, to attempt that variety from any of them." There was now only wanting the authority of a botanist, to give sanction to the opinion, that plants obtained by cuttings did not possess an *individual vitality*, but were merely dependent extensions, sympathising with the frailties of the stock from which they were taken, and incapable of outliving its dissolution. Sir James E. Smith, the late lamented President of the Linean Society, considered it as established, that "propagation by seeds is the only true re-production of plants." With such authorities, this supposed law of vegetable life, was eagerly and generally acquiesced in, and considered as accounting for the decay of certain productions of the orchard, the garden, and the fields.

Dr. Fleming refuted the opinion in his *Philosophy of Zoology*, published some years ago, and here adds a few additional facts. These are, that cuttings from the scarlet lychins and wallflower may be prolonged, as plants, for an unlimited length of time; that the leaf of a potatoe may be made to outlive the stem; that oats and beans were kept alive by him for four

years, by preventing them from producing flowering stems: that the osier, gooseberry, poplar, &c. have been propagated by extension for ages, and that the plants still perform their respective functions; in short, that a bud, which ever way made to throw out leaves and roots, is essentially as good as a seed.

On the value of Agricultural Societies.—The writer says that "they have been the means of diffusing much knowledge, and of calling forth the practical application of much that existed. They have been instrumental in generating a kindlier and more confidential feeling between landlord and tenant. They have raised his general standard in the management of a farm, by bestowing due honor and commendation on the active, industrious, economical, and neat-handed farmer. They have been the means of introducing better stock, better seed, better implements of husbandry, and better modes of culture. And they have contributed not a little to rub off that rusticity which might leave us fit for a market or farm, or for bearing a prominently ridiculous place in the picture of 'The Rent Day;' but which completely unfitted us for general society." Their decay he attributes to the depressed state of agriculture during the last thirteen years, and he calls on the editor to use his exertions to revive them, because "we are of all men most in danger of getting into a lifeless, unprofitable routine in the management of our work: and of adopting (unless we are affronted out of it by the example of neighbours) Mrs. Macclarty's excuse for all slovenliness,—"It will just do well enough."

Mc'Intosh' Practical Gardener.—*Systematic Alternation of Crops.*—The following alternation is given in this publication.

"1 Brocoli, cabbage, cauliflower, and, savoys.
2 Common beans, French beans, and peas.
3 Carrots, beets, and parsnips.
4 Turnips, early potatoe, onions, leeks eschalots, &c.
5 Celery, endive, lettuce, &c. &c.

"It is found in practice, that celery constitutes an excellent preparation for asparagus, onions, and cauliflowers.

"Turnips or potatoes are a good preparation for cabbages or greens.

"Brocoli or cabbages are a proper preparation for beans or peas.

"Cauliflowers prepare well for onions, leeks or turnips.

"Old asparagus land affords a good preparation for potatoes or carrots.

"The strawberry, currant, gooseberry, and raspberry, for the same.

"Turnips give a suitable preparation for celery or endive; and peas, when well manured, are a good preparation for spinach, &c.

Dandelion.—Is an excellent salad, and a good stomachic. Where it is as a weed, cover it early in the spring, with rotten tan, or decayed leaves, it will soon come up and be well blanched, and form a great addition to spring salad. It will also force well all the winter, on a slight hot bed or in a warm cellar.

The fruit of alpin Strawberries, and probably some of the prolific sorts, may be retarded till late in the season, by going over the plants in May, or when they come into blossom, and carefully cutting off all the bloom with a pair of scissors, preserving the leaves as much from injury as possible. This is repeated until towards the middle of June, when more blossoms appear; and those are left to produce fruit, which they readily do until destroyed by the autumnal frosts."

The operation of watering before Sunrise, in counteracting the Frost, seems to produce its effects in a manner similar to the application of cold water to a frozen joint or limb, which is injured by the sudden application of warmth. This plan has been long adopted by the London nurserymen, when their plants have been affected by frost during the night, and is attended with the most marked success. Vegetables of any sort may be recovered by this application, and it should be attended to by the gardener both in spring and autumn."

ART. 82. *Plants from South America.—Copy of a letter from* Henry Perrine *Esq. U. S. Consul, to Dr. Sam. L. Mitchill, dated Consulate U. S. A. Campeche, 23d May* 1829.

Dear Sir,—Your favor of April 4th with pamphlets and gazettes is gratefully acknowledged. Regreting that the inclemency of the season destroyed those plants which I sent by the Desdemona, it is believed that those which are now embarked will arrive in safety.

There are, in two boxes, five varieties (two of each) numbered and named, the letters being the Spanish imitation of the Indian pronounciation. No. I and No. II the *Sasqui* and the *Yasqui* are the cultivated varieties, the former most abundant the latter thought the best. No. III and No. IV the *Chelem* and the *Cajum*, are inferior and uncultivated. No. V, the *Maguey*, uncultivated, said to be a subvariety of the famous *Maguey de pulque* of Mexico, and from which a drink is actually extracted by soldiers, natives of the highlands stationed here. There is here however, one plant of the undoubted *Maguey de pulque* which was brought from the capital of the republic about two years ago; and I hope to obtain another by the return of the Desdemona to forward to your fostering care. Adopting the Spanish common title of *Henequen* or *Jenequen*, for all the cultivated plants

which produce the fibrous article of commerce called *Sisal Hemp*, I cannot refrain from repeating my fixed belief that the introduction of *Jenequen* to the Agriculture of the U. States, is an object of national importance, worthy of the special interposition of the general government, and destined to form a distinguished epoca in the annals of our prosperous industry. The introduction of the celebrated *Maguey de pulque* also merits a very attentive consideration.

In this peninsula there are neither personal, written, or printed sources of scientific information and I have therefore been unable by reference to ascertain the botanical arrangements of the aforesaid plants, yet have long since inclined to place them all among the Agaves.

The circular of Sept. 6th 1827, from the Treasury Department to certain Consuls, relative to the introduction of exotics, imposes a task which owing to the nature of this people and country, is 100 fold greater both in time, trouble, and expense, than it would be even on the frontiers of our northwestern States, but for which neither funds are provided, nor is there even that recompense which is insured to the *Inventor* of a trifling *Machine*, held out to encourage the *Introducer* of a useful *Plant*, which may powerfully influence the destinies of the nation. On this suqject the Spanish Constitutions are superior to ours.

The Consuls of other nations have regular salaries (a policy which our government will soon be forced to imitate, at least in Spanish America,) but with us they are dependent altogether on accidental fees, which in a few Consulates amount to an enormous income, but in many others (inclucing this) do not produce the fourth part necessary for an economical subsistence. Hence the task expected by Government is in my case not merely unreasonable, but almost impossible. Animated however, by some portion of the feelings of the illustrious individual on whose valuable time I am so selfishly encroaching, no sacrifices on my part shall be spared to accomplish the objects of the Treasury Circular; and I, therefore, respectfully beg, that you will select for me such works, not exceeding fifty dollars in value, as are best adapted to aid my enquiries and observations in the Peninsula of Yucatan, and deposit them with Joseph Bouchaud, Merchant, who will be instructed to pay you for the same, and forward them to me by return of the Desdemona.

With the hope that your scientific and patriotic life may be many years prolonged as a distinguishd blessing to your country.

I have the honor to be,
Sir, your Obedient Servant,
HENRY PERRINE.

[The following is an extract from a communication on the subject of the above letter, in the Morning Courier of this city.]

William Bullock, Esq. in his interesting publication, entitled "Residence and Travels in Mexico," &c. a few miles before he arrived at Perote, a settlement 1200 toises above the level of the sea, on the road from Xalapa to the capital, saw great plantations of what is commonly called the large American aloe, but he nevertheless pronounces it to be the Agave americana of botanists. He relates that it is produced in considerable quantities, and that the favorite liquor of the inhabitants, called *Pulque* is prepared from it. In the native dialect, they call it *Muguey*, and cultivate it over a great extent of country. This refreshing beverage is in universal request by the people of the metropolis, Puebla, Tobeca, &c. and such is the demand for it, that the three cities just mentioned, are reported by Baron Humboldt to have paid during the 1793, duties on it to the government to the amount of $817,739. The plants are set about five or six feet asunder, and in favorable situations, blossom in about ten years, at which time the valuable juice or sap they afford can be better obtained. As soon as the cultivator perceives that the long flowerstem is preparing to shoot up, he cuts out the leaves which form its centre, and hollows it out in the shape of a bowl; at the same time removing most of the other leaves, so that the whole sap destined for their supply flows to the great stem, and is received into the bowl-shaped cavity, into which it runs with such rapidity as to require emptying several times a day for several months. When collected, it is preserved in jars or skins. It undergoes a moderate fermentation in the course of a few days, and is then fit for immediate drinking. Strangers prefer it when fresh, but the natives seldom use it until it has acquired a strong taste, and a disagreeable feeted smell called *fuerte*, when it is esteemed to be in perfect excellence.

Mr. B. states that a strong spirit called pulque brandy is distilled from this liquor.

The leaves of the maguey form the roofs of some of the Indian houses, and their fences.

Ropes, thread, cloth and paper are also, he relates made from it. Some parts are employed medicinally, while the roots, with the aid of sugar, are converted into preserves and sweetmeats.

Persoon, in his Botanical Synopsis, observes that where it has been transplanted into Portugal, and even into Switzerland, hedges are made of it. These hedges are reported to be so strong and impenetrable as to have made great resistance to the armies of the late campaigns. It was found necessary to send pioneers to cut down these live fences. It is also cultivated with equal success in the south of France.

Mr. Persoon also refers to the Flora of Peru, for the various uses made of it there, and affirms that thread and paper can be prepared from the leaves.

The popular title of Henequen or Jenequen is given to all the cultivated plants of this family which yield the fibrous article of commerce, called Sisal-hemp—It is believed by good judges that its introduction into the Southern States of our Union will be very important to their agriculture and manufactures, especially by furnishing the materials for cordage and refreshment. The Maguey de Pulque is entitled to a primary consideration.

ART. 83.—*On the Botany of America.* By William Jackson Hooker, LL.D. F.R.S.E. [From Dr. Brewster's Edinburgh Journal of Science.

In noticing as we propose to do, the progres of botany, and the present state of that science in various parts of Europe, it is by no means our intention to pass by in silence what has been effected by our brethren in North America, a country which, for extent and interest, has scarcely any parallel in the world. If we were to estimate it from its southern extremity, we should commence our calculations at the tenth degree of north latitude; but as we shall confine our observations to those districts which have submitted to the sway of the United States, or to those which may with more propriety, be termed the British possessions in North America, we shall omit the Mexican dominions altogether; and beginning with the thirtieth degree of latitude, we have a space extending northward beyond the artic circle; and if we enclude the island of Newfoundland, through eighty degrees of longitude in its utmost breadth. The vegetation is as various as the climate and the soil, throughout this vast extent of continent. In the Floridas grows a species of *Palm*, (*Chamærops Palmetto*,) and the *Orange*, the *Cotton*, the *Indigo* and even the *Sugar cane* may be cultivated there to great perfection and advantage. In the Carolinas and Floridas the eye of the traveller is charmed with the beauty and grandeur of the forest trees, the various species of the *Evergreen oak*, the numerous kinds of *Pine*, *Walnut* and *Plane*; the majestic *Tulep tree* (*Liriodendron tulipifera*,) reaching to the heighth of 140 feet, and loaded with large and brilliant flowers, the curious *deciduous Cupress*, and the superb *Magnolias*.

A different vegetation occurs in the more northerly of the United States; and what renders the botany of North America peculiarly interesting to the British naturalist is, that a very large proportion of its vegetable productions may be assimilated to our own climate. This is especially the case with that extensive portion of it under our immediate consideration. The *Oaks* and *Firs* of this district of North America now decorate many of our plantations and pleasure grounds, and as the quality of their timber becomes to be better known and appreciated, they will doubtless occupy a conspicuous place in our woods and forests. Our shrubberies owe their greatest beauty to the various species of *Kalmia*, *Azalea*, *Rhododendron*, *Robinia*, *Cornus*, *Sambucus*, *Ceanothus* and *Lonicera*, *Syringa*, the flowering raspberry, and a hundred others, which flourish as if they were the aboriginal natives of our soil; whilst the gardens of the curious are indebted for many of their choicest productions to the herbaceos plants of North America, the greater number being remarkable for the brilliancy of their blossoms, and not a few such as the *Dionæa* and *Sarracenia*, striking us as amongst the most singular of all vegetable productions in their structure. Nay, such is the superiority of the climate, and the fertility of the soil, that our European fruits which were taken over by the early settlers, have improved prodigiously in quality; to that degree even, that we now procure grafts of them for our orchards and wall-trees; and the most highly flavored apples that we (north of the Tweed at least) can obtain for our deserts, are actually imported themselves from America.

In the arctic regions of the New World, there is a striking similitude in the botanical productions with those of the summits of our highest Scotch mountains.

The earliest accounts of the plants of North America consist of detached memoirs, principally published by foreigners, the Americans being themselves, for a long time, too much occupied in commerce and agriculture to devote their time and attention to science: nor is it till a country has arrived at that degree of political and mental improvement to which we find the United States now to have attained, that we can expect any branch of science to be estimated as it deserves.

A small history of the plants of Canada by Cornuti appeared in Paris in 1635. About the year 1740, was published Catesby's Natural History of Carolina, &c. in 2 vols. large folio, illustrated with a great number of highly coloured figures of plants, &c. Gronovius edited the *Flora Virginica* of Clayton, at Leyden, at 1739. In the Memoirs of the American Academy, Dr. Cutler printed his account of the Vegetable Productions of the New England States; and in 1788, Walter's Flora Caroliniana appeared in London.

The elder Bartram, during his extensive and interesting travels, discovered many curious plants, and was the means of making them known to the botanists of Europe, especially of Britain. His friend and patron. Mr. Peter Collinson, who kept up a constant

correspondence with him, Colden, and other naturalists of America, was one of the first to cultivate the plants of that country in England, which he did with much success, at his charming garden at Mill Hill, near London. Dr. Garden was another eminent promoter of American botany, and in his communications to Linneus, he sent many new and interesting plants. His botanical enthusiasm seems to be very great; and we have some striking proofs of it lately published by Sir J. E. Smith in the Linnean correspondence. In one of those letters addressed to the illustrious Swede from South Carolina, Dr. Garden thus expresses himself on the occasion of his being disappointed of an intended journey to the Apalachee mountains, by an order for the expedition to return. "In my letters," he says "to you at that time, I gave you an account of my intended journey, and in what manner the arrival of our new governor put a stop to us. Good God! is it possible to imagine the shock I received when the unhappy express overtook us, just two day's march on this side of the mountains? My prospect of glutting my very soul with the view of the southern parts of the great Apalachees was instantaneously blasted. How often did I think of the many happy hours that I should have enjoyed in giving you a detail of their productions! How often did I think of the secret pleasure which I should have, in being instrumental, though in the least degree, to the advancement of our knowledge of the amazing works of the Supreme Architect. How happy should I have been to have thrown in my mite, by adding one new genus or species to the vegetable or mineral kingdom! With what pleasure did I bear the sun's scorching beams, the fatigue of travelling, the cold ground for my pillow, and the uncomfortable dreariness of rain, when I had in view the wished-for examination of the productions of the mountains! We had advanced about 260 miles of our journey through the woods, when our hour was come that all our promised elysium vanished, and left nothing but a blank, a doleful blank to me, and I may say to every one of the company; for we were happily collected, and unanimity reigned amongst us. What will you think when I tell you that one of our company was a very accurate drawer, and he had promised me to do every thing for me, and according to my direction, that I should desire; so that in this one circumstance, my loss was irreparable. But why do I dwell on this most disagreeable of all the incidents that ever providence mingled in my lot?"

Kalm, the celebrated pupil of Linneus, who was also professor of Natural History at Abo, in Finland, visited America at the expense of the King of Sweeden, in the year 1747---51. His researches extend as far as Canada, and the plants which he collected served materially to enrich the *Species Plantarum* of his great master; while the Linnæan herbarium, as Sir J. E. Smith assures us, abounds in specimens brought home by Kalm, and distinguised by the letter K. The name of this botanist is commemorated in the beautiful genus *Kalmia*.

Until the year 1803, however nothing had been published containing a thoroughly scientific arrangement of any extensive portion of the northern part of the New World. The providing of materials for such a work was reserved for Andre Michaux, a Frenchman, every way qualified for the task, and who after returning from a most successful botanizing expedition to Persia, and bringing with him among other treasures, the curious *Rosa simplicifolia* and *Michauxia companulaia* was appointed to visit North America at the charges of the French government, with a view to enrich France with its various vegetable productions, particularly its forest trees; for which it must be confessed, that the climate of that country is even better qualified than that of England.

New-York Michaux constituted the depot for the collections which he made through New-Jersey, Pennsylvania, and Maryland; and he there established a garden, from whence he dispatched numerous packages to France. Another depot was formed at Charleston, for the reception of the productions of the Carolinas and the Alleghany mountains, which he explored with great difficulty and danger, travelling no less than 900 miles across the wiles of Carolina and Georgia alone. Thence he visited Spanish Florida, making his way up the rivers for considerable distance, in a canoe hollowed out from a single trunk of the deciduous *Cypress* (*Cupressus disticha*). In May 1789. he investigated the mountains of Carolina, and, assisted by some Indian guides, without whom it would have been impossible to have made any progres; he penetrated the vast woods of the intervening plains, through thickets of *Rhododendron*, *Kalmia*, and *Azalea*; but was prevented from going as far as he had intended, in consequence of a dispute between the Indians and the white people, which rendered it unsafe for Europeans to venture among the former. He therefore returned to Charleston by New-York and Philadelphia. He now recommended and instructed the Americans to collect and prepare the root of the *Ginseng* (*Panax quinquefolia*) in the same manner as the Chinese do for sale; and for a long time, a trade was actually carried on in that article.

Michaux had still another object in view, which was that of tracing the botanical topography of America; and having affected so much in the southern States, he resolved to extend his researches as far north as Hudson's Bay. In short, he arrived at a country where as he says himself, "nought but a dreary ve-

getation was found, consisting of black and stunted, pines, which bore their cones at feet four only from the ground; dwarf Birch and Service Trees, a creeping Juniper, the Black Currant, the *Linnea borealis*, *Ledum*, and some species of *Vaccinium*."

Michaux did not return to Europe till 1796, when he was shipwrecked on the coast of Holland. The circumstace is thus related by his byographer in the third volume of the *Annals du Museum d' Historie Naturelle*. "The passage had not been unpropicious; but on the 18th of September, when in sight of the shores of Holland, a dreadful tempest arose; the sails were rent, the masts broken, and the vessel struck and split against the rocks. Such was the state of exhaustion and fatigue to which all the sailors and passengers were reduced that the greater number would have been lost, but for the assistance that was rendered by the inhabitants of Egmond, a little neighboring village. Michaux was lashed to one of the yards, and he was sensless when carried on shore; he did not recover until some hours after, when he found himself extended before a fire, with more than fifty persons standing around him. His first idea, when his recollection returned, was to enquire for his collections. He was informed that the packages which contained his own effects had been lying on deck, whence they were washed by the violence of the waves; but that those chests which had been lodged in the hold had been taken out safely. This intelligence consoled him. Notwithstanding the wretched state of his health, Michaux was compelled to remain six weeks at Egmond, and to work day and night. His plants having got wetted by the salt water he was obliged to immerse them all in fresh water, and one after another to dry them in new papers."

On his return to his native country, Michaux employed himself in prepairing his history of Oaks, a work that reflects the highest credit upon its author; not only because of the number of new species which are there made known to us, but also on account of the important uses to which the timber of the different kinds may be applied. An appointment to explore other countries* prevented him from publishing himself any of his various new and important discoveries. His historiy of the Oaks was indeed printed, but the plates were not all ready for the press before his departure from Europe. It was edited in 1801. But that work which more immediately concerns our present subject, and which was compiled from the materials that he collected during his travels in North America, is his *Flora Borealis Americana, sistens Characteres Plantarum quas in America Septentrionali collegit et detexit Andreas Michaux.* This appeared in 1803, (the very year of Michaux's death,) in two vols. octavo, with fifty-one neat plates in outlines. The anonymous editor, and indeed he may justly be considered the author, was the eminent Claude Louis Richard, late professor of botany at the school of Medicine in Paris, and unquestionably one of the most profound botanists that Europe has ever known. The whole is in Latin, and as may be supposed, the proportional number of new species is extremely large: and certainly, considered as the first Flora of so extensive a country as North America, it confers the highest credit on the industry and acuteness of Michaux.

Long before the publication of this work, another naturalist, Frederick Push, a Pole*, we believe, by birth, but educated in Dresden, instigated by the richness of the vegetation, and the hope of making numerous discoveries, resolved to visit North America, and carried his plan into execution in 1799, when he embarked for Baltimore, in Maryland, with the resolution not to return to Europe till he had examined the country and collected materials to the utmost extent of his means and abilities; and it is certain that he did this under many and great disadvantages. His travels were extensive; for he remained nearly twelve years in America, and in two summers only he went over an extent of country, equal to 6,000 miles, principally on foot, and with no companion save a dog and his gun. From the first four or five years of his residence in America, Push seems to have been chiefly employed in collecting plants about Philadelphia,

*He embarked in the ill-conducted expedition under Captain Baudin; but like many others of the offices, when the vessel arrived at the Isle of France, he refused to proceed further, and thinking that Madagascar presented a glorious field to the naturalist, he quitted the expedition; keeping his motives a secret till the moment of the ship's departure. Landing on the east coast of that Island, he resolved to prepare a garden for the reception of his plants in the vicinity of Tamatada; but here he was seized with a fever, the consequence of the climate aided by over exertion, and of which he died in 1803.

*This celebrated Botanist, we believe has been commonly, though erroneously, considered a native of Poland. While Professor Silliman was in Canada in the autumn of 1819, he had a personal interview with Mr. Pursh, in the course of which the latter stated expressly, that he was a *Tartar*, born and educated in Siberia, near Tobaltski. "Indeed," says Professor Silliman, "he possessed a physiognomy and manner different from that of Europeans, and highly characteristic of his native country."

Such was the *enthusiasm* of his mind, and his complete devotion to the *ruling passion*, that he thought little of marching day after day, often with a pack weighing sixty pounds on his shoulders, through forests and swamps, and over rocks and mountains, provided he could discover a *new plant*; great numbers of such he assured me he had found, and that he intended to publish the drawings and descriptions of them in his Canadian Flora." [See "Remarks made on a Tour between Hartford and Quebec," p. 351].

Mr. Pursh died after a lingering illness, at Montreal, July 11th 1820.

and in receiving them from his correspondents for cultivation in his gardens there. In 1805, he explored the western territories of the southern states, including the high mountains of Virginia and Carolina; and in 1806, he went through many of the northern states, commencing with the mountains of Pennsylvania, and extending his investigations to those of Newhampshire, embracing the country of the lesser and great lakes.

But the most important of the advantages to which I allude, were derived from Pursh's personal acquaintance with, and communications from various botanists, who about this time were to be found in various parts of the United States.

Among these, the first undoubtedly in point of rank and character, will stand the amiable Dr. Muhlenberg, minister of the German church at Lancaster, in Pennsylvania. He was thoroughly conversant with the vegetable productions of his own district, and in a measure with those of America generally: for he published in 1813, a Catalogue of the plants of North America, which contains a great number of new species; and what redounds still more to his credit, though it was a posthumous work, he was the author of an excellent treatise on the Grasses and Sedges of North America, which was edited in 1817 by his son, assisted as he tells us, in the preface, by Mr. Elliot, Mr. Baldwin and Mr. Collins. This work is entirely in Latin. Dr. Muhlenberg carried on a most extensive correspondence with the botanists of Europe, by whom he was greatly esteemed. He supplied the celebrated Hedwig with many of the rare American mosses, which were published either in the *Stirpes Cryptogamicæ* of that author, or in the *Species Muscorum*. To Sir J. E. Smith, and Mr. Dawson Turner, he likewise sent many plants and one of his new mosses was published by the latter gentleman, in the annals of botany, under the name of *Funaria Muhlenbergii*. It is well known that Dr. Muhlenberg possessed very extensive materials for a general description of the plants of the New World; but what has become of these we have been unable to ascertain. His herbarium is in the possession of the American Philosophical society.

Another of the friends of Pursh was Dr. B. Smith Barton, a physician and a naturalist, and unquestionably a great promoter of science, and especially of botany in America. He was appointed professor of Natural History in the university of Philadelphia in 1789. We recollect, in our early youth reading with great delight some of his Fragments of Natural history, as they were appropriately termed, which first brought to our notice many highly curious objects of that country, and reminded us of the writings of our own Stillingfleet and White. He has the credit of publishing an elementary work on botany, which though rather diffuse in style, is full of entertaining anecdotes; and the references and terms being all made applicable to American plants, it must have done much towards recommending the study of botany in that country.

Mr. Marshal, author of a work on the forest trees of America, was then living, and he imparted to Pursh some useful materials, principally afforded by his garden, rich in trees and shrubs.

The sons of the celebrated John Bartram, before mentioned, possessed an old established garden, founded indeed by the elder Bartram, at Philadelphia on the banks of the Delaware. Mr. William Bartram, the well-known author of the travels through North and South Carolina, was then, and we believe is still living; a man who merits the gratitude of every naturalist, for the cordial reception which he gave to Wilson, the ornithologist, at the period when that highly-gifted individual had scarcely a friend in the world. It was the advice and encouragement that Mr. Bartram gave him, that was mainly the cause of the appearance of one of the most valuable works on science that was ever published in any country, the American Ornithology. Mr. Pursh appears to have received an equally kind reception and much valuable information from Bartram.

(To be continued.)

ART. 84.—REVIEW. *Conversations on Botany; with Plates. Sixth Edition.* 12 *mo. London* 1828. *The Child's Botany.* 12 *mo. pages* 116, *S. G. Goodrich, Boston* 1829.

Every one is sensible of the fact that children, without any apparent labor or aversion, learn the names of the material objects with which they come in contact. Of the words, with which the generality of mankind are familiarly acquainted at the age of thirty, four fifths at least, we are inclined to think, are understood by youth prior to their eighth year: If this supposition is near the truth, it will be perceived that names, and ideas of course, are acquired with rapidity and ease in the morning of our existence. This extensive vocabulary of words, and rich store of thought, are principally obtained from objects presented to the senses, before or independent of the instructions received at school; for the time spent by youth in learning to read and write is, perhaps the least productive of new ideas of any equivalent time except that in sleep. The conclusion then, we would draw is, that the ordinary method, in which our common elementary instruction has been imparted, neither quickens thought nor extends its range, but is rather calculated to arrest the excursive and grasping propensity of the mind. The recent improvements, however, adopted in education particularly in the in-

creasing attention paid to infant schools, are a strong and gratifying proof, that many in the community have correct views of the principles of instruction.

If then, children readily learn and familiarly use to convey their ideas, the names of many thousand things, we know of no reason why they may not be taught a few hundred technical terms in a science, when the objects they denote are presented to them. Here we would particularly refer to botany—a study pleasing, useful, and peculiarly adapted to the youthful mind. The object is not to make them proficient botanists, but rather to *draw the attention* to this important branch of the study of nature. Create a *taste* in juvenile minds for the knowlenge of plants, and the temple of the rural goddess will ever be crowded with adult votaries. With scarcely an exception, a teacher or parent who is able to buy one of the works, the titles of which we have given, is qualified to initiate pupils into the science, or in other words, to give them a relish for botanical information.

The works, which form the subject of our remarks, are admirably executed, both in the clearness of the type and beauty of the lithrographic plates. The "Conversations on Botany" is designed more particularly for schools in England, and the "Child's Botany" for those of this country. We shall direct the attention our readers more particularly to the last.

The observations in the first chapters are in a stile suited to youth, and calculated to impress them with the variety, beauty, utility, and wonder of the vegetable kingdom. It is the impression of most persons that the study of botany is dry and difficult of comprehension by children: it can be made so, we grant, but when presented, as every science should be, in a manner adapted to the powers of the young mind, it is not only easy of comprehension, but is pleasing in no ordinary degree. Taking the first plate for instance, in which are representations of the four principal kinds of roots, the *branching*, *fibrous*, *spindle* and *bulbous*, what difficulty, we would ask, even for a child of six years old, in getting clear and distinct ideas, particularly if specimens are required to be obtained? no more than in understanding what is a chair, a table, or a waggon. Taking the learner to the next plate, in which are given ten of the most common forms of leaves, containing a *cordate* or heart shaped, an *ovate* or egg, an *arrow*, a *palmate* or hand, and *pinnate* or winged leaf, he cannot fail of having these forms clearly impressed on his mind, especially by drawing them a few times on his slate, and getting specimens from the garden and the fields. Let him be required again to produce a lilly, a drawing of which he will find in the next plate: Let him give the number of the stamens: let him point out the pistil: let him shake some of the dust or pollen from the anthers on to the stigma, and then let the important office, which these sexual organs perform in the production of fruit and seeds, be explained—and on this being comprehended, which cannot fail of being done, the mind will not only undergo the pleasing sensations peculiar to the discovery of such a beautiful and wonderful adaptation of parts, but will take a range wide as the heavens and extending to the very author of existence.

"Nature is the glass reflecting God,
As by the sea reflected is the sun."

Having said thus much on the facility of initiating youth into the study of botany, we will subjoin a few thoughts on the benefit resulting from an acquaintance with the science.

The security and degree of virtue, and consequently the sum total of human enjoyment, depend very much on the source whence we derive our pleasures. The thoughts of mankind naturally run in the same channel in which do their neighbours, or those with whom they associate; and as comparitively but few, owing, we think, in a great measure, to the limited cultivation of natural science, have a desire to investigate the phenomena of nature, the impressions that give the general characteristic of the mind are derived from ostensible and superficial appearances: hence there is a common mould for the mind, and a great facility of imbibing the notions and acquiring the habits of others. The thoughts, desires, passions, and pleasures, flow in this common channel; they have their being, and are connected with the daily occurrences or avocations; hence the happiness of a majority of mankind is effected alone by the smiles and frowns of fortune. In the former case, when the cup of plenty is poured out, it too often surfeits with its richness, and untunes the system; in the latter, the very dregs are drinked, and the whole stream of life becomes turbid without scarcely a solitary rivulet uniting its chrystal waters. But they, whose minds are enriched with botanical science have given unto them, as unto the subject of the heavenly birth, that which the world neither knows nor can take away. This volume of nature

"they may read, and read
And read again, and still find something new,
Something to please and something to instruct."

Botany is an inexhaustible source of thought. The infinite variety of forms, the beauty and brilliancy of colour, the richness of fragrance, and the constant changes in the vegetable kingdom, ever afford delight to the senses; and these properties acquire never failing interest, and impart more pleasure, when the admirer of nature becomes acquainted with the facts, which the study of systematic botany, and vegetable chemistry reveals. The study is confined to no age, no sex, no condition, but wherever we may be, in the evening fire circle, in the green house, reclining un-

der the shade by meandering brooks, climbing the mountain tops, or traversing heaths and verdant plains, novelty, pleasure and instruction are afforded. The habitual train of thought is out of the common beaten track, and the mind acquires both refinement and solidity.

The knowledge of plants is of practical utility in almost every situation and pursuit, and pre-eminently so to the farmer, the gardener, the physician and the traveller; as a branch of useful knowledge, it is an accomplishment, and adds worth to females—it enables them to ornament the parlour, and gives additional variety, and we may say flavor to culinary preparations. But in no light can it be viewed more important to females than in adding to their qualifications to discharge that important duty of mothers—"teaching the young idea how to shoot." On this subject we would, *a propos*, make an extract from Dr. Mitchill's address before the New-York Hor. Society.

"There is, perhaps, not a more agreeable feature in our social system, than the exertion to inform the female mind. We were all fondled in female arms, dandled on female knees, and taught by female lips, before we were delivered over to the pedagogue. During these exercises, the principal portion of which lie beyond the reach of adult recollection, we acquired the rudiments of the most substancial knowledge. As our mothers and nurses imbue the infant with the earliest ideas, and commence the formation of the strongest habits, their education is a matter of the utmost moment. Make the women christian and our religion is safe; make them patriotic, and the republic is secure; make them intelligent and the soul shall be exalted. A short anecdote will evince the sway of the fair sex. A boquet in the possession of a belle, attracted the notice of an inquisitive swain. She answered his queries by telling the ignorant fashionable, the common terms of the flowers, accompanied with the generic and specific names, according to the classification of Linnæus. The beau was so humiliated and confounded that he betook himself to the science, the better to qualify himself for her company."

The immortal Linneus, at the early age of four years, had his attention drawn to plants, by seeing his father exhibit, and hearing him describe a flower to a neighbour. If parents were more in the habit of imbuing the tender mind with the love and admiration of natural objects, there would not be so many youth of bright parts carried away in the current of vicious habits, and swallowed up in the vortex of modern dissipation. Instead of filling the head of children with useless and foolish stories, and instead of suffering the changes and phenomina of nature to pass unnoticed, how much better it would be, if mothers would adopt plans similar to the following; "Stanzas of verses," says Doctor Mitchill, "prepared for children are now under recitation by my little girls.

> A rapturous prospect out yonder is seen:
> Fields, forests and meadows all clothed in green:
> And though to enjoy it, the day long we try,
> It never grows tiresome, nor wearies the eye.

And this:

> The garden looks beautiful after the showers:
> Come, let us go, sister, and pick a few flowers;
> For the violets, the daisies, the pinks and the roses,
> Will give us the means to make sweet pretty posies.

And also another uttered in my ears as I write:

> We hope, dear papa, it will presently suit
> To walk in the orchard and gather some fruit;
> Where the trees in their season successfully bear
> The apricot, cherry, peach, apple and pear,"

The mind and the affections of man appear to have a constitutional sympathy with the works of his creator, particularly with animated nature, and hence the happy effects of an intimate acquaintance with them. A poet has truly said,

> All natural objects have
> An echo in the heart.

The arguments conveyed in this couplet, together with those that may be derived from the facts, that the study of the different branches of Natural History holds out the best prospects in the useful and ornamental employments of life for the talanted and enterprising youth of our country, and calculated to produce a general elevation of the human mind, are, in our view, most conclusive and weighty in support of giving the juvenile mind, a taste for the information contained in the great book of nature.

It was our intention to have pointed out the application of botany, chemistry, zoology, geology, and other divisions of natural studies, to the various pursuits of the practical business of life, but as our remarks have already run to an undue length, we must postpone it for some future occasion,

ART. 85.—*Proceedings of the Inspecting Committee of the New-York Horticutural Society.*

JUNE 2, 1829.—Mr. A Smith presented a Bangalese Rose, very large and delicate color, being the first time of its flowering here; also No. 1, best early peas.

Dr. Hosack, early peas, No. 2, from Hyde Park.

Mr. Low exhibited early peas, and early potatoes, 1 dozen of which weighed 2lbs. 8 1-2 oz.

Mr John Curr presented 4 heads of early York cabbage, weighing 7lbs. 7 1-2 oz.

Mr. Codey, a large white radish, and a remarkably fine black ditto; also two large cucumbers.

Mr. Hogg, Geranium macranthum and Pœonia whitleji.

Mr. Aymar, a boquet of choice flowers.

June, 9.—Mr, Parmentier exhibited a beautiful collection of roses, among them were Pourpre favorite, Roide, Rome, Agnes, Maxwell, Blanche celeste, Pourpre superbe.

Mr. A. Smith, a fine collection of roses, consisting of 78 sorts, raised at his nursery in Newark.

Mr. Oakley, beautiful roses, and some ripe early cherries.

Mr. Neale, 2 varieties of pheasant eye pinks.

Mr. Kennersley, 3 early Battersea cabbages, weighing 10lbs. 4 1-2 oz.

Mr. Codey, from the garden of Com. Chauncey, a quantity of fine strawberries, some of which measured 3 1-4 and 3 1-2 inches in circumference.

June, 16—Mr. Wilson presented 4 heads of salad weighing 1 lb. 8 oz. (sorts, 2 of Wilson's and 2 of Simpson's,) from Murray Hill.

Mr. Low, 2 heads salad, 1 weighed 1 lb. 13 oz. 1 do. 1 lb. 12 oz.

2 long prickley cucumbers, 1 measured 14 1-2 inches, 1 do, 12 inches.

Mr. William Curr, 3 cauliflowers, weighing as follows, 3 lbs. 1 1-4 oz. 3 lbs. 4 oz. 4 lbs. 5 oz.

Mr. Matthewson, 5 heads salad, weighing as follows, 1 lb. 9 1-2 oz. 1 lb. 14 oz. 1 lb. 15 oz. 1 lb. 10 oz.

Also 6 early carrots, weighing 8 1-2 oz. without tops.

Mr. T. Bridgeman, 4 sorts beans, viz: the long pod, the early mazagan, the green nonpareil, the windsor—planted the 25th February and transplanted the 31st March.

Mr T. Codey exhibited 6 early beets, weight 1 lb. 4 1-2 oz. without tops.

Also a quantity strawberries from the garden of Com. Chauncey at the Navy Yard, largest measured 3 1-4 inches.

Flowers.

Mr. Wm. Wilson exhibited about 50 sorts roses from Murray Hill.

Mr. Oakley, 9 sorts, do. and 1 Cactus Speciosa.

Mr. Neale, 1 Delphinium Grandiflorum, 1 Carnation, 2 new kind of pinks, monthly honeysuckle.

Mr. Prince, proprietor of the Linnæan Botanic Garden, Flushing, exhibited about 100 sorts roses, comprising a number of varieties of the moss rose and black roses. Also, a specimen of

1. Arundo Donax fol. variegat.
2. Pæonia Humei } of China.
3. ——Fragrans, }
4. Iris ochroleuca odorata of India, and other species.
5. Clematis alpina.
6. Amaryllis longifolia var. alba and rosea.
7. Rubus lasciniatus or parsley leaved bramble.
8. Coronilla coronata.
9. Lilium Philadelphieum.
10. Delphinium grandiflorum *pleno*.
11. Rosa multiflora var. alba and rubra.
12. Amaryllis equestris *pleno*.

June 23.—Mr. Hogg presented in a pot, a cyrthanthus obliquus.

Mr. Combault a Passiflora cœrulea.

Mr. Oakley, a collection of flowers, among which were Œnothera fraseri, Rosa moschuta, Monarda fistulora, Antirrhinum majus, and Pyrethrum parthenium.

Mr. Wilson a splendid collection of Roses.

Mr. W. Phelan, specimens of scarlet Lychnis, double and single Phlox suaveolens, and Rosa adorata.

Mr. Cooke, some fine multiflora Roses and scarlet Lychnis.

Mr. Parmentier, a beautiful collection of rare flowers, some of which were very fine seedlings.

Mr. Prince, 52 species and varieties of flowering shrubs and plants; also 28 kinds of roses and 11 varieties of carnations.

Mr. William Curr, 4 heads of Simpson's salad, weighing 6 lbs. 11 oz.; 6 long beets, weighing 6 3-4 lbs.; Bishop's early peas; a head of cauliflowers, 3 lbs. 9 oz.; 2 early York cabbage, 4 lb. 1 oz.

Mr. J. Matthewson, 4 heads of best kind of Coss Lettuce, 8 lbs. 15 oz.; and six Orange Carrots, 15 oz.

Mr. George Still, 6 turnip beets, 3 1-4 lbs. 4 early York cabbage, 8 lbs.; 2 heads Coss Lettuce, 3 lbs. 10 oz.; 2 do. Simpson's do. 2 1-4 lbs. 9 oz. 2 do. butter. do. 1 3-4 lbs.

Mr. Wilson, 2 heads imperial Lettuce 4 lbs. 3 ounces.

Remarks *by the Editor*.—The exhibitions for this month have been numerous and highly interesting. The flowers and plants, presented by Messrs. Prince and Parmentier, were labelled with numbers, in reference to their catalogues, or had their botanical names written in full, and in some instances with brief discriptions. This practice we would recommend to all as making the duties of the secretary less arduous, and affording greater pleasure and satisfaction to the visitors and inspectors. The English names also would be an improvement. We cannot but regret however, that such a fine collection of flowers and fruit as often decorates the table of the committee, should be seen by so few. For the want of a more convenient room, the exhibitions are confined to a single evening, affording the exhibitors but very

limited opportunities to display their skill and success to their fellow citizens. We understand that it would be very agreeable to have the flowers and plants, after having been inspected by the committee, set upon the tables in the rooms of the Lyceum, where they can be seen by both ladies and gentlemen who daily visit there.

We recommend to the active members of the society, the following extract of a communication in the N. E. Farmer, in relation to the Massachusetts Hor. Society.

"Fine accommodations are now preparing at the Hall for future meetings; with a reading room attached, where all the agricultural journals of this country, and the principal ones from England can be examined; as well as many rare and expensive works on fruits and flowers. Care will be taken of all articles sent for exhibition. And it is suggested that it would be a good plan if gentlemen would send, *every Saturday*, any fruits or flowers that may be particularly fine, for public examination; as this is a day when many of the members are in town, and would be pleased to make an examination of the products of the various gardens and orchards in this vicinity."

ART. 86.—*Notice of the Gardens at Albany, and of Dr. Hosack's estate, Hyde Park.* [To the Editor of the New-York Farmer and Horticultural Repository.] New-York, June, 1829.

SIR.—In a late tour up the North River as far as Albany, I had the pleasure of spending one day, the 19th inst. in visiting several of the gardens in the vicinity of that city. From the very limited time spent at each, nothing like a particular description of any of them can be given; but their general appearance exhibits an interesting state of Horticultural improvement. The lawn and pleasure grounds around the Patroon's residence, although not upon an extensive scale, are nobly decorated by abundance of the most stately forest trees, shrubs and herbaceous flowers. The kitchen garden is of considerable extent, and cultivated in a masterly style, under the management of Mr. Churnside, who has the charge of the whole Domain, including the green house and vineries, &c.

The vines in the houses looked thrifty, and showed abundance of fruit. Those in the open ground, trained upon espalliers, although not so forward, appeared remarkably vigorous and equally prolific. The sorts chiefly cultivated, are a fine white kind under the name of the Trout Water, but which from its superior hardiness, I am inclined to think is a different and much more valuable sort for this country. The black Hamburgh, the Millers Burgundy, and I think some other varieties are amongst the collection. The whole premises bespeak in every department the faithful performance of well experienced horticulturists, and does great credit to Mr. Churnside; and as a pattern for other wealthy individuals of the state, the example of the Hon. Mr. Vanrenssalear is certainly well worthy of imitation. The residence of the young Patroon being situated upon the very verge of the city, admits of scarcely any lawn or pleasure ground; but in the rear of the house is one of the finest kitchen gardens that I recollect of having seen in this country. The grape vines here are all cultivated in the open ground and trained upon espalliers, and are remarkably healthy and fruitful. But what attracted my notice most particularly, was some beds of the finest strawberries I have ever seen. Considerable quantities had been gathered long before from the beds, yet some parts of the beds had still the appearance of being literally covered with berries. The fruit is of a dark red colour, longish shape, middling sized, highly and well flavoured. Mr. Duncan Robertson, the head gardener, informed me that he received a few plants of this sort from a Mr. Paul Macgregor, under the name of the Scotch Strawberry. Mr. Robertson is himself a Scotchman, and neither he nor his strawberries detract aught from the well established reputation of Caledonian horticulture.

I next visited the garden of Judge Quackenboss, in a still more circumscribed situation, further down in the city. It is laid out chiefly as a flower garden, and contains a valuable collection of choice herbaceous flowers and shrubs. The bloom of roses in Mr. Qackenboss' place particularly those of the Cottage Province I have never seen excelled. In the garden of Mr. Wilcox I also observed some very fine varieties of dark, as well as other coloured roses. In the garden of Mr. Douling, I saw a very fine crop of the kidney bean, in full bearing. In this vicinity, too, I had a view of the fine healthy looking appearance of Mr. Dennison's Plum-trees, but was informed that owing to a severe frost, which happened in the month of May, their fruit, as well as that of most other trees in the neighbourhood, had been almost entirely destroyed; however, in the garden of Mr. Slingerland in the same street I saw some very fine cherries. His grounds are handsomely laid out, well decorated with flowers and shrubs, and his kitchen garden well stocked with vegetables.

About one mile farther out of town is the estate of Jesse Buel, Esq. consisting of nearly one hundred acres, ten of which are appropriated for a nursery, under the management of Mr. James Wilson, who is a very active, enterprising, well experienced horti-

culturist. The fine collection of fruit trees, &c. &c. which are roaring in good order throughout this department, bids fair to be of great advantage to the occupiers of those vast tracts of farm lands to the north and west of Albany, who may yet be only considered as commencing the introduction of the more choice and valuable varieties of fruit, for the facilitating of which the Albany nursery seems most eminently well calculated. A neat little piece of pleasure ground, well stocked with a choice variety of plants, and some stately pines, decorates the south front, and east end of the Judge's mansion house. The ground to the north and east of which arises with a gentle ascent in a northerly direction, and upon this declivity, having a southern exposure, is the kitchen garden. It exhibits a rich profusion of the most delicious vegetable productions, all under the best mode of cultivation. The collection of grapes cultivated here, both of native and foreign sorts, is pretty extensive, and from the judicious experiments of such a man as Mr. Buel, the public may soon expect some useful and valuable information on the subject of their cultivation. Of the farming department of Mr. Buel's estate, I feel totally inadequate to attempt any account of it, having neither time nor experience to do such a subject any kind of justice. One very valuable improvement however in this department, I cannot let pass unobserved, which is the introduction of the thorn hedge, instead of post and rail fencing. He is trying the success of various kinds of native thorns; they all look remarkably well, but I think that experience will prove the three thorned accasia (Gleditschia trieacanthos) to be capable of forming a strong fence the most expeditiously of all others.

At Hyde Park, a little more than half way between this city and Albany, I stopped to see the estate lately purchased there by Dr. Hosack. It contains six or seven hundred acres of ground, and extends on one side more than a mile in length, on the eastern shore of the North River. The natural scenery along the whole line, to the distance of about a quarter of a mile from the verge of the river, is highly picturesque; and in no direction can the eye be turned through this romantic situation, without the mind's being impressed with the strongest emotions of reverence of the sublime power and wisdom of the great Creator. On the highest summit of the bank, terminating nearly a quarter of a mile from the water's edge, to a height of several hundred feet above its level, is seen the celebrated belt of forest trees that extends along the whole line; between this belt and the river, the ground is broken with many knowls, open glades, and ravines, which are lined down to the water's edge with trees. The more open compartments too, are enlivened by the interspersion of clumps and single trees.

About half a mile above Hyde Park landing, (which is upon the southern extremity of the Dr's. estate,) stands the Mansion House, not far from the brink of the descending grounds towards the river. In every direction to the east, north and south of the mansion, the ground spreads out in one wide open highly elevated and extensive plain, which at a considerable distance easterly from the house, gently descends to a gentle hollow, through which a fine mill stream, skirted with trees winds its way gradually around towards the south westerly point of the estate, where it empties into the North River near the landing. The Doctor intends making a carriage road from the landing in a direction nearly parallel with the course of the stream, to a distance of about a quarter of a mile, where it will turn to the left and pass in an inclined direction through part of the Park and lawn towards the mansion, affording in its course a view of the pleasure ground, green house and hot houses &c. which are to be located to the south of the dwelling. The stables, and the office houses &c. are all on the north of the mansion. The main approach is to be brought from the public road that passes a little to the east of the mill-stream, alluded to above, which in its passage over the stream, will afford a fine opportunity for having exhibited an interesting display of architectural beauty, of which the Doctor will no doubt avail himself, as well as of every other ornamental improvement, of which this most interesting place is so extremely susceptible.

I am sir,

Yours, &c.

WILLIAM WILSON.

ART. 87.—*Notice of* DR. SAMUEL L. MITCHILL'S *Discourse before the New-York Horticultural Society, by a* HORTICULTURAL SOCIETY IN PRUSSIA.

MR. EDITOR,

A few days since, I casually opened a Prussian work, entitled "*Verhandlungen des Vereins zur Beforderung des Gartenbaues in den Koniglich Preussischen Staaten*," Transactions of the Society for the promotion of Horticulture in the Royal Prussian States; and I was pleased to find, that several pages of it are devoted to extracts translated from the Discourse of DR. MITCHILL before our Hor. Society. The Prussian work alluded to is beautifully printed in the Quarto form, and the pages which contain the extracts are a part (pages 315 to 319 inclusive) of the fourth volume.

The attention that is excited abroad by the productions of our countrymen must gratify our feelings. In this happy age of general intelligence, all the liber-

al, and the learned, and the philanthropic seem to take delight in freely interchanging views and sentiments. *No language* forms a barrier to their purpose of investigating truth; *no region*, that can offer subjects for their profitable study, is left unexplored. These reflections have often been suggested to my mind, when reading periodicals, issued in the remotest countries. And when we find, that our publications are perused by the intelligent, who are thousands of miles removed from us, we are naturally stimulated in the exertion of our efforts. We are assured, that at the present day of general investigaton, while we are writing, we are writing for all nations of the earth.

New-York, June 20, 1829. J. F. S.

NEW YORK, JUNE 30, 1829.

Silk Worm benefited by Electricity.—Some time since Dr. Pascalis announced, that in his opinion the health of the silk worm and the disposition and ability to produce silk, depended greatly on the electricity of the air. Under this impression he instituted an experiment which has been highly satisfactory in its result. He separated his worms into three divisions. The platform containing the first was covered with a silk cloth and supported on glass non-conductors. The second platform was covered with a silk cloth which is a non-conductor. The third was left uncovered. Upon the first, after the worms had reached their third age, he daily discharged electricity. The effect was, that the first division produced very large cocoons and nine days earlier than the third—the second not quite as large nor quite as soon as the first. The experiment was made under many unfavorable circumstances, still the worms were very healthy.

We trust Dr. P. will pursue his experiments and deduce those practical results, that will insure him the reward and honour to which he is justly entitled.

Wilson's Garden at Murray Hill.—Among the numerous objects which present themselves to the tourist in the neighbourhood of New York city, or rather within the city itself, are the well stocked and highly cultivated gardens. The principal of these belong to the members of our Horticultural Society, at whose weekly exhibitions and monthly meetings, the finest specimens of flowers, fruits, roots and other productions are regularly exhibited and premiums awarded for the best. A high and noble spirit of emulation has thereby been excited, which has produced very beneficial effects. New plants have been introduced, improved methods of culture established, and a general amelioration of the articles achieved. Thus has the quantity of garden-stuff been increased, its quality mended, and the market more efficiently supplied.

These remarks have been made, in consequence of two visits, on the part of the writer to the grounds of Mr. William Wilson, on the elevation formerly known as the Incleberg, but now by the name of Murray Hill. This tract includes ten acres, and is in fine cultivation. It is just three miles distant from the City Hall.

The eminence is such that the prospects are charming. In their several directions the rocks of New-Jersey, the hills of Staten Island, and the plainer shore of Long Island, are distinctly in view. This latter perspective to the eastward is particularly interesting, as the East River, or sound, with its numerous and ceaseless navigation is directly in sight. The like observation may be made of the Churches with their steeples, six or seven of which are visible from the garden, as well as various other of the large buildings.

This spot contains one of the most beautiful walks, that perhaps can be found any where hereabout. It extends the whole length of the garden from north and south, and is twelve feet wide—with a variegated and choice assortment of annual, perennial and ornamental plants on both sides. But its excellence consists in the easy and gentle swell and declination of the surface, which the proprietor has so managed as to produce a beautiful effect.

His fruit trees appeared to be in excellent health, more especially the plums, cherries, nectarines, apricots, and the dwarf paradise apple-trees in full bearing. Even the peach orchard, of one hundred and fifty trees; seemed to have suffered no disease, either in the leaves or near the roots—and were stocked with fruit. They are seven years old from the seed, and six from the inoculation—and present strong evidence of the doctrine maintained by Mr. W. in his valuable book, the Economy of the Kitchen Garden, &c. that peach trees, notwithstanding their late sickness and decay, are by no means to be despaired of. The method practised, is to propagate from the seed and thereby produce new and fresh varieties.

Yet, the most admirable part of the whole show, remains to be mentioned. It is the collection of roses, to the number of about four thousand plants. Among them are one hundred of the most choice varieties, such as the *moss, unique, proxence, variegated, dark purple* of six sorts, including the one known by the name of the *black frizzled, Champney's cluster, Chinese, many flowering, Ayrshire, Greville,* and *eighty kinds* received from Mr. Murray, the Curator of the Royal Botanical establishment near Glasgow, including some of the native roses of Scotland. A large proportion of the flowers were in full expansion, and presented a spectacle of extraordinary rarity and beauty. The proprietor has shown great judgment

in the location of his garden, and no less skill in cultivating and adorning it.

Although so much has been already written, it may be proper to notice his ample supply of herbaceous vegetables, such as *Phloxes, Lythrums, Veronicas, Verbenas, Loniceras,* among which are the newly discovered *L. pubescens* and other species.

The stock of annuals is extensive, and several have already bloomed. And these, together with those before mentioned and others not herein enumerated, will keep up and continue the succession of flowers until the arrival of frost.— S. L. M.

New-York, June 13, 1829.

The Bison.—Mr. Fessenden.—I should like to be informed through the medium of your paper, if there has ever been an attempt made to domesticate the bison, or the breed crossed and what were the results?

I have been led into this inquiry by supposing that the bison, from the extraordinary size of his bones, and the depth and formation of his chest, is far superior to our domestic ox, for agricultural purposes.

I think it will be admitted that this powerful inhabitant of our prairies possesses a double portion of strength and agility compared with our domestic cattle.

We have been in the practice since the first settlement of our country, of importing our neat stock from Europe, frequently at a great expense, and have wholly neglected that noble animal, which formerly moved over the greater part of our country, but is now scarcely to be seen east of the Mississippi river, and will in a few years probably become extinct.

Yours, respectfully, F.

Remarks.—Willich's Domestic Encyclopedia says that the "Bison (*Bos Americanus*) is a large species of ox, with round and distant horns, which point outwards, a long and woolly mane, and a large fleshy protuberance on the shoulders.

"Bisons are capable of being domesticated, and in this state are sufficiently tractable for the purpose, they are sometimes rendered useful for agricultural labors. Their *flesh* is used as food, and the fatty protuberance on the shoulders is esteemed a great delicacy. The *tongues* which are reckoned superior to those of oxen, are frequently transported to New-Orleans, where they always have a ready sale. When these animals are quite fat they are said to yield sometimes as much as 150 pounds weight of *tallow*. The latter is so important an article of commerce, that, in many instances, the hunters cut out only the tongues and tallow, leaving the remainder of the carcase to be devoured by wild beasts. Powder flasks are made of the *horns*. The *skins* are capable of being converted into an excellent buff leather; and when dressed with the hair on, the lighter skins serve the Indians as beds, and for clothes, gloves, and shoes. Some persons use them as blankets, and find them a very warm and pleasant clothing.—The *hair* is spun and woven into various articles of clothing, which are both durable and useful, and are peculiarly soft and pleasant to the wearer."

English Sheep.—Mr. Pickering, passenger in the Mary Howland, from Liverpool, has brought over two rams and two ewes, of the Lincolnshire longwool breed of sheep, one of which was shorn on the passage, and yielded the extraordinary fleece of 19 lbs. He has also three rams, six ewes and six lambs, of the Leicester Cowling fleeces, bred by Sam. Wiley, Esq. at Gransby, near York. Mr. P. is to take them to Albion, state of Illinois, with a view of ascertaining how they will thrive on the prairie lands. These prairies are very extensive and covered with wild coarse grass. It is his intention to burn off the native, which is easily done, and then sow several kinds of cultivated grasses. Should he succeed, and we see no reason why he should not, as circumstances and experiments are favorable, the rearing of sheep will add much to the importance and wealth of the western section of our country.

The Leicester breed is the same as is represented at page 142 vol. 1 of the New-York Farmer.

Mr. P. has also brought over a handsome little stud-horse, about 40 inches high from the Shetland Islands, a pair of beautiful Pheasants and two shepherd Dogs.

Wild Rice.—Mr. Darby, the geographer, says the most valuable vegetable production of Michigan, and the north west territories, is the Wild Rice, (zinzania aquatica.) It grows abundantly in the marshes, ponds, lakes and rivers of these territories, and exists upon the streams and lakes, in a greater or less quantity from Louisiana to the arctic circle."

See American Farmer, Vol. 7, p. 204.

This is certainly a most valuable grain and richly deserving the most particular attention of the citizens of the United States. One of its chief excellencies appears to be that it needs no cultivation. And from what we learn of the wild rice that grows on the shores of Lake Superior (and which we take to be the same) it is probably not inferior to that which is cultivated in the southern states.

It is most earnestly recommended to the notice of the citizens of the Atlantic states, residing on tide water, and on ponds and lakes, abounding in marsh.

It is daily becoming an object of greater interest in domestic economy, and would be a happy exchange for the wild-oats and other coarse grasses, which now form almost the only production of our marsh lands yielding nothing for the support of man, and affording but an indifferent hay for cattle.

As it grows spontaneously "from Louisiana to the

artic circle, it must, of course, embrace all our latitudes, and would probably succeed.—In which case we should obtain, without any other trouble than the mere harvesting it, a crop rivaling in quantity and quality, that which is now produced by a laborious and unhealthy cultivation of it in the southern states. It would form a source of wealth to its owners, little, if any, inferior to the indigo, cotton, and sugar of the south. It is certainly richly deserving an experiment. And it can, no doubt, be easily procured through the interest of the war office, by the Secretary's darwing the attention of our Indian agents and military commanders, at our western posts, to the subject. Indeed, it would seem to be an object of such national importance as well to merit the particular notice of the federal government.

A SUBSCRIBER.

Early Yellow Wheat.— MR. SKINNER,—I enclose you a few ears of the early yellow wheat which is now ready for the scythe, and it is a very good crop, good, without any reference to the season, which you know to be a very bad one. I think I am safe in saying that it will weigh 61 or 62 pounds per bushel measure. Time only can determine what will be the fate of the latter kinds. The early Mexican is nearly ripe, and will be fully so in one week, but that is very tender and only suits dry land well protected from water. I shall seed no more of it. The blue stem gives good promise of a crop and is a very valuable latter wheat, perhaps the best we can have in this part of the state. The Baltimore red-chaff resisted the winter very well, but was taken with what they call the "go-back," or in plain English, left the land, and is only to be seen in detached bunches. Is the early yellow wheat known to you, or cultivated in any part of Maryland? Accident put me in possession of a few bushels the preceeding season, from which I obtained a great produce, and I now have 100 acres of it. Safety from fly is insured by it, for it is seeded late and is too hard for their use when the fly appears in the spring. The growth is good, abundently so for harvesting, and none grow wheat for the straw. A few weeks will bring it to my threshing machine, when I shall be able to determine its value in relation to all other wheats, but I now think I shall seed 200 bushels of it in the coming season. Should any of your obliging correspondents know any thing of this kind of wheat they would oblige me and others by giving, through your paper, such information as they have of it.

FAIRFAX.

Fairfax county, Va., June 8th. 1829.—

Seed Corn.—MR. SKINNER,—The perusal of your valuable agricultural periodical has always afforded me much gratification, and imparted to my mind some theoretical information concerning the pleasing and delightful employment of tilling the earth. I now have the 9th vol., neatly bound, lying before me and I must say, if any one article therein has paid me for my year's subscription, it is the letter of C. Jones on the method of selecting Seed Corn.—His method taken originally from J. Cooper of N. Jersey, was, to go into the field, after the corn was fully matured, and select those ears that grew on stalks bearing two or more ears of corn. Last year I gave the method a fair experiment; I had two fields adjoining, of the same description of land, though with this difference, I planted my select corn in a field on which a crop of cotton had been grown the previous year, whilst the other was a stubble. The stubble field produced a large and tall stalk with very seldom more than one ear of corn—the other field yielded me two ears nearly as often as the stubble failed to produce more than one ear, and what was remarkable, the stalk of the select corn was generally small, the idea being advanced to me by my neighbour, last fall I selected only the top ear for my present crop, having observed the top ear was generally best.

Hoffwyl Retreat, Georgia, June 4th. 1829. ASA B. COOK.

Average price of Vegetables sold in Washington Market for June 1829, [Corrected by WILLIAM CURR, Gardener, for the New-York Farmer.]

Cauliflower, plenty and fine from 6 to 12 1-2 cents per head.—*Green peas*, a great supply, from $2 25 to 62 1-2 cts. per bushel.—*New potatoes*, from $2 50 to 1 75 per bushel.—*Old potatoes*, from 37 1-2 to 62 1-2 per bushel.—*Cabbage*, 25 to 62 1-2 per dozen heads.—*Lettuce*, 8 to 18 per dozen.—*Radishes*, 12 1-2 for 6 to 18 bunches.—*Carrots*, 4 to 10 per bunch of 7.—*Beets*, 12 1-2 to 4 per bunch of 5.—*Onions* from seed, 6 per large bunch; transplanted do., 12 1-2 cts. for 16 to 12 small bunches.—*Water-cress*, 18 per 1-2 peck.—*Rhubarb-leaves*, 3 to 6 per bunch.—*String-beans*, $2 50 to 62 1-2 per bushel.—*Turnips*, 4 to 10 per bunch of 9.—*Salsify*, 6 to 10 per bunch of 12.—*Horse Radish*, 3 to 6 per bunch.—*Parsley*, 3 to 6 per bunch.—*Spinach*, 37 1-2 to 50 per bushel.—*Beet Tops*, 25 per bushel.—*Cucumbers*, 2 to 6 each.—*Squashes*, 3 to 10 each.—*Strawberries*, 2 to 8 per basket.—*Cherries*, 18 to 4 per quart or pound.—*Raspberries*, 8 to 3 per basket.—*Currants*, 4 to 6 per quart.

REMARKS.—The supply of vegetables has been very great, and the quality excellent, throughout the month. The showers during the month have been timely and refreshing. Some days have been quite hot, but the average temperature has been below summer heat, The few last days in the month have been unpleasantly cold. At Troy the thermometer was at 55, and at Greenville, about 20 miles West of Hudson, there was a fall of Snow.